# The Croonian Lecture

ON THE

# COAGULATION OF THE BLOOD,

Delivered before the Royal Society, June 11th, 1863,

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(*Concluded from page* 153.)

IT is a very curious question,—What is the cause of the blood remaining so much longer fluid in some vessels than in others: I believe that we must accept it simply as an ultimate fact, that just as the brain loses its vital properties earlier than the ganglia of the heart, so the heart and principal vascular trunks lose theirs sooner than the smaller vessels of the viscera, or than more superficial vessels, be they large or small. We can see a final cause for this, so to speak. So long as the heart is acting, circulation will be sure to go on in the heart and principal trunks; whereas, on the contrary, the more superficial parts are liable to temporary causes of stagnation, and occasionally to what amounts to practical severance from vascular and nervous connexion with the rest of the body; and it is, so to speak, of great importance that the blood should not coagulate so speedily in the vessels of a limb thus circumstanced as it does in the heart after it has ceased to beat. Were it not for this provision, the surgeon would be unable to apply a tourniquet without fear of coagulation occurring in the vessels of the limb. As an illustration of the importance of a knowledge of these facts, I may mention a case that once occurred in my own practice. I was asked by a surgeon in a country district to amputate an arm of which he despaired. The brachial artery had been wounded, as well as veins and nerves, and at last, being foiled with the hæmorrhage, he wound a long bandage round the limb at the seat of the wound as tightly as he possibly could. It had been in this condition with the bandage thus applied for forty-eight hours when I reached the patient, and the limb had all the appearance of being dead. It was perfectly cold, and any colour which it had was of a livid tint. But having been lately engaged in some of the experiments which I have been describing, and having thus become much impressed with the persistent vitality of the tissues and the concomitant fluidity of the blood, I determined to give the limb a chance by tying the brachial artery. Before I left the patient's house he had already a pulse at the wrist, and I afterwards had the satisfaction of hearing that the arm had proved a useful one.

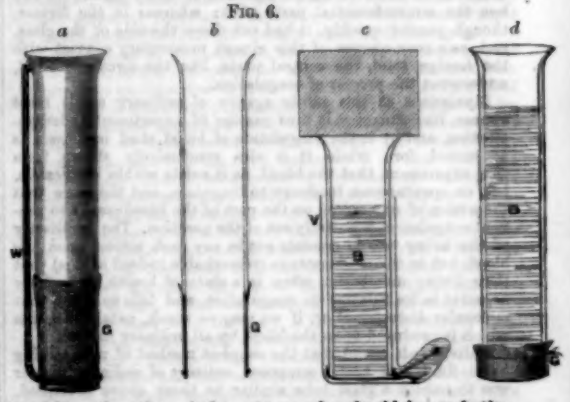
One of the two arguments in favour of activity on the part of the vessels as a cause of fluidity of the blood having been completely disposed of, let us now consider the other—viz., the rapid coagulation of blood shed into a basin, appearing at first sight to imply a spontaneous tendency of the blood to coagulate, such as would have to be counteracted by the vessels. This, also, has proved fallacious.

In the first place, it appears that the coagulation, after all, does not go on in a basin so suddenly as one would at first sight suppose, but always commences in contact with the foreign solid. When blood has been shed into a glass jar, if, on the first appearance of a film at the surface, you introduce a mounted needle, curved at the end, between the blood and the side of the glass, and make a slight rotatory movement of the handle, you see through the glass the point of the needle detaching a layer of clot, whatever part you may examine. The process of coagulation having thus commenced in contact with the surface of the vessel into which the blood is shed, may, under favourable circumstances, be ascertained to travel inwards like advancing crystallization towards the centre of the mass. It appears, however, that this extension of the coagulating process would not take place had not the blood been prepared for the change by contact, during the process of shedding, with the injured orifice of the bloodvessel and with the surface of the receptacle.

I have only very recently become acquainted with the remarkable subtlety of the influence exerted upon blood by ordinary solids. I was long since struck with the fact, that if I introduced the point of an ordinary sewing-needle through the wall of a vein in a sheep's foot, and left it for twelve hours undisturbed, the clot was still confined to a crust round the point of the needle, implying that coagulum has only a very limited power of extension. I thought, therefore, that by proper management it might be possible to keep blood fluid in a vessel of ordinary solid matter lined with clot. But various attempts made with this object failed entirely, till I lately adopted the following expedient:—Having opened the distal end of an ox's jugular vein, containing blood and held in the vertical position, taking care to avoid contact of any of the blood with the wounded edge of the vessel, I slipped steadily down into it a cylindrical tube of thin glass, somewhat smaller in diameter than the vein, open at both ends, and with the lower edge ground smooth in order that it might pass readily over the lining membrane, and so disturb the blood as little as possible by its introduction, and influence only the circumferential parts of its contents. The tube was then kept pressed down vertically upon the bottom of the vein by a weight, in a room as free as possible from vibration, and I found on examining it at the end of twelve hours, that the clot was a tubular one, consisting of a crust about one-eighth of an inch thick next the glass and the part exposed to the air, but containing in its interior fluid and rapidly coagulable blood. In another such experiment, continued for twenty-four hours, though the crust of clot was thicker, the central part still furnished coagulable blood.

But it may perhaps be argued by those who say that the bloodvessels are active in maintaining fluidity that the small portion of the vein covering the end of the tube was acting upon the blood, which certainly was fluid where in contact with it, the clot being in the form of a tube open at the lower end. To guard against such an objection I made the following experiment:—I extended a tube like that above described by means of thin sheet gutta-percha (o, Fig. 6, *a*), contriving that

FIG. 6.




the internal surface of the gutta-percha should be perfectly continuous with that of the glass tube as represented in section in Fig. 6, *b*. The lower part of the gutta-percha tissue was strengthened by a ring of soft flexible wire such as is used by veterinary surgeons for sutures, and the wire (w) was also extended upwards to the top of the glass so as to maintain the rigidity of the gutta-percha portion during its introduction into a vein, but at the same time, from its softness, permit the gutta-percha part to be bent at a right angle after it had been introduced, and so close the orifice of the glass tube with ordinary solid matter. In Fig. 6 (*c*) the tube is represented pressed down by a weight in a vein (v) with blood (n) in the glass portion, while the gutta-percha part closes it below. At the same time I performed a comparative experiment, to which I would invite particular attention, although I am sorry at this late hour to occupy the attention of the Society so long. I tied a thin piece of gutta-percha tissue over the lower end of a similar glass tube, and simply poured blood into it from the jugular vein of an ox. I wished to compare the condition of blood which had been simply poured into a tube with blood which had been introduced without any disturbance of its central parts. But in order to make the experiment a fair one, as it might be said that the blood poured from the vein had been

more exposed to the air than that into which the tube was slipped, I proceeded in the following way:—I obtained a long vein containing plenty of blood, and having first filled the second tube with the gutta-percha bottom (Fig. 6, *d*) by simply pouring blood into it from the vein, I cut off a portion of the vein which had been thus emptied, and having tied one end and everted the lining membrane of the other end, and having also everted the lining membrane of the orifice of the remainder of the vessel which was full, I poured the blood from the full portion through the air into the empty part. In doing this I had difficulty in getting blood enough, and it passed through the air in slow drops, and that only when the vein was squeezed by my warm hand. At last, having introduced sufficient for the purpose, I slipped down the compound tube and bent its gutta-percha portion, as represented in Fig. 6 (c), and left both tubes for awhile undisturbed. At the end of three hours and a half, I found that the blood which had been simply poured in was a mass of clot, and fluid squeezed from it yielded no threads of fibrin, coagulation being complete. How long it had been so I do not know. I did not examine the other blood until seven hours and three quarters had expired, and then found that, just as in the cases where a simple glass tube was introduced, the clot was tubular, and the chief part of the blood was still fluid in its interior, the only difference being that in this case the clot formed a complete capsule, being continued over the gutta-percha instead of being deficient below, as it was when the vein closed the end of the tube. Now, if we consider the two parts of this comparative experiment, we see that the receptacles in which the blood was ultimately contained were precisely similar in the two cases—viz., glass tubes closed below with gutta-percha; and that the blood which was simply poured into the tube was much less exposed to the air than the other, and also was not subjected, like it, to elevation of temperature, a circumstance which promotes coagulation; but yet this blood became completely coagulated in a comparatively short time, whereas the other after a much longer time was coagulated only in a layer in contact with the foreign solid. But in the latter case the blood had been so introduced as to avoid direct action of ordinary matter on any but the circumferential parts of it; whereas in the former, though poured quickly, it had run down the side of the glass, and, as a consequence of this almost momentary contact with the foreign solid, the central parts, like the circumferential, underwent the process of coagulation.

Mysterious as this subtle agency of ordinary solids must appear, its occurrence is thus matter of experimental demonstration, and by it the coagulation of blood shed in a basin is accounted for; while it is also conclusively shown from this experiment that the blood, as it exists within the vessels, has no spontaneous tendency to coagulate, and therefore that the notion of any action on the part of the bloodvessels to prevent coagulation is entirely out of the question. The peculiarity of the living vessels consists not in any such action upon the blood, but in the circumstance (remarkable indeed as it is) that their lining membrane, when in a state of health, is entirely negative in its relation to coagulation, and fails to cause that molecular disturbance or, if we may so speak, catalytic action which is produced upon the blood by all ordinary matter.

I afterwards found that the simplest method of maintaining blood fluid in a vessel composed entirely of ordinary matter was to employ a glass tube similar to those above described, except that its upper end was closed by a cork perforated by a narrow tube terminating in a piece of vulcanized india-rubber tubing that could be closed by a clamp. This tube was slipped down into a vein till the blood, having filled it completely, showed itself at the orifice of the india-rubber tubing, to which the clamp was then applied. The whole apparatus was now quickly inverted, and the vein was drawn off from over the mouth of the tube, which was then covered with gutta-percha tissue to prevent evaporation. After the inverted tube had been kept undisturbed in the vertical position for nineteen hours and three-quarters, coagulable blood was obtained from the interior of the clot.

We have seen that a clot has but very slight tendency to induce coagulation in its vicinity unless the blood has been acted on by an ordinary solid; and it is probable that with perfectly healthy blood it would be unable to produce such an effect at all. This appears to me to be very interesting physiologically, but especially so with reference to pathology. I must not now go fully into the circumstances that led me to it, but I may express the opinion I have formed—that clot must be regarded as living tissue in its relation to the blood. It is no doubt a very peculiar form of tissue in this respect, that it is soft, easily lacerable, and easily impaired in its vital properties. If disturbed, as in an aneurism, it will readily be brought into that condition which leads to the deposition of more clot; but if undisturbed, it not only fails to induce further coagulation, but seems to undergo spontaneous organization. I have seen a clot in the right side of the heart, and extending into the pulmonary artery and its branches, unconnected with the lining membrane of auricle or ventricle or with the pulmonary artery except at one small spot where it had a slight adhesion, developed into perfect fibrous tissue, by virtue, it would appear, of its own inherent properties. Another observation which I once made, and which then completely puzzled me, now seems capable of explanation. In laying open the bloodvessels of a dead body, I observed in many of the veins a delicate white lace-like tissue which evidently must have been formed from a clot. This I now believe to have had the same relation to the coagulum as the flimsy cellular tissue of old adhesions has to lymph.

It may not be altogether superfluous to mention some other facts illustrative of the active influence of ordinary matter in promoting coagulation, and the negative character of the lining membrane of the vessels. I find that a needle introduced into one of the veins of the foot of a sheep for a much shorter period than is necessary to produce the first appearance of the actual deposit of fibrin upon it, leads after a time to coagulation where the needle had lain: in other words, that a foreign solid, by a short period of action on the blood, brings about a change that results in coagulation, though the blood still lies in the living vessels. I have also ascertained that after blood has been made to coagulate in a particular vessel by introducing a needle into it, if the coagulum as well as the needle is removed, and more fluid blood is allowed to pass in, this blood remains fluid for an indefinite period, showing that the needle had not impaired the properties of the vessel by its presence; so that the previous coagulation must be attributed, not to any loss of power in the vein, but simply to the action of the foreign solid.

In seeking for an analogy to this remarkable effect of ordinary solids upon the blood, we are naturally led to the beautiful observations of Prof. Graham, lately published in the "Philosophical Transactions." He has there shown what insignificant causes are often sufficient to induce a change from the fluid or soluble to the "pectous," or insoluble condition of "colloidal" forms of matter. Indeed Mr. Graham has himself alluded to the coagulation of fibrin as being probably an example of such a transition.

There is, however, another remarkable circumstance that must be taken into consideration, of which I myself have been only recently aware, and which may be new to several Fellows of the Society, and that is, that in spite of the influence of an ordinary solid the liquor sanguinis is not capable of coagulating *per se*. It was observed many years ago by my colleague, Professor Andrew Buchanan, of Glasgow, that the fluid of a hydrocele, generally regarded as mere serum, coagulated firmly if a little coagulum of blood diffused in water was added to it; an effect which he was disposed to attribute to the agency of the white corpuscles.* I repeated Dr. Andrew Buchanan's observations last year, and satisfied myself first that the diffused clot did not act simply by providing solid particles to serve as starting-points for the coagulating process. I tried various different materials in a finely divided state, and found that none of them, except blood, produced the slightest effect. But I found that if a mixture of serum and red corpuscles from a clot was added to some of this hydrocele fluid, it was soon converted into a firm solid mass. If a small quantity of the serum and corpuscles was dropped into the fluid, and allowed to subside without stirring, coagulation rapidly took place in those parts where the red corpuscles lay, while other parts of the fluid remained for a long time uncoagulated. This seemed to indicate that the red corpuscles had a special virtue in inducing the change. I confess, however, that till very lately I was inclined to suppose that in the hydrocele fluid the fibrin must be in some peculiar spurious form. We know that the buffy coat of the horse's blood coagulates in a glass without addition of clot, and we know that lymph coagulates, so that I did not doubt that liquor sanguinis would always undergo the change when influenced by ordinary matter. But an observation which I made not many days ago shows that this was a mistake. I obtained the jugular vein of a horse, and having kept it for a while in a vertical position till I could see through its transparent coats that the red corpuscles had fallen from the upper part, I removed all bloody tissue from that part of the vein, and punctured it so as to let out the liquor sanguinis into a glass. Finding after eighteen minutes that the liquid had not begun to coagulate, I added a drop of serum and corpuscles

* Proceedings of the Glasgow Philosophical Society, Feb. 19th, 1845.

to a portion of it, and within seven minutes there was a clot wherever the corpuscles lay, whereas the rest of the fluid was still very imperfectly coagulated after another half hour had elapsed. That the liquor sanguinis to which no addition had been made coagulated at all, was sufficiently explained by microscopic investigation, which showed not only abundant white corpuscles, but also several isolated red ones that had not subsided. This observation was made three hours after the death of the horse; but I obtained essentially similar results on repeating the experiment in another horse an hour after death, so that there can be no doubt whatever that the fibrin was in the same condition as it is in the blood-vessels of a living animal. The observation appears also particularly satisfactory on this account, that the liquor sanguinis was not separated from the corpuscles by any process of transudation through the walls of the blood-vessels, which might be conceived to involve retention of some constituent of the liquid, which, though in solution, might be unable to pass through their pores; but simply by the subsidence of the corpuscles, which must have left all the materials of the liquor sanguinis behind them. Hence it is proved beyond question that if the liquor sanguinis could be separated completely from the blood-corpuscles, it would resemble the fluid of hydrocele in being incapable of coagulation when shed into a cup.

Now this struck me as a very satisfactory and beautiful truth, inasmuch as it clears away all the old mystery of the distinction between inflammatory exudations and dropsical effusions. Dropsical effusions, exhibiting little disposition to coagulate, have been supposed to consist almost exclusively of serum, and the exudation of the entire liquor sanguinis has been regarded as the special characteristic of inflammation, and very unsatisfactory theories have been put forward by ingenious pathologists to account for this difference. But it now appears that a dropsical effusion like that of hydrocele is undistinguishable from pure liquor sanguinis.

Various dropsical effusions have been lately investigated with reference to their coagulability on the addition of blood-corpuscles by Dr. Schmidt, of Dorpat, who finds that while they differ from one another in the amount of water they contain (just as is the case with serum filtered artificially through animal membranes under different degrees of pressure), yet they are all but universally coagulable. Schmidt has also carried the investigation further. He has found that by chemical means he can extract from the red corpuscles a soluble material which, when added to these exudations, leads to coagulation. In other words, he shows that the corpuscles do not act as living cells, but by virtue of a chemical material which they contain, which can be used in the state of solution, free from any solid particles whatever. He found also that the aqueous humour made a dropsical effusion coagulate, and that the same effect was produced by a material extracted from the non-vascular part of the cornea. Hence he regards the blood-corpuscles as only resembling other forms of tissue in possessing this property. These observations are extremely interesting, if trustworthy; and that they are so, I do not at all doubt; but having only read Schmidt's papers within the last day or two, I have not yet had opportunity of verifying his statements.*

It remains to be ascertained what share the material derived from the corpuscles has in the composition of the fibrin. Schmidt inclines to the opinion that the fibrin is probably composed, in about equal proportions, of a substance furnished by them and one present in the liquor sanguinis. If this be true, the action of an ordinary solid in determining the union of the components of the fibrin may be compared to the operation of spongy platinum in promoting the combination of oxygen and hydrogen.

It may be asked, how comes it that when the blood of a horse is shed into a cup, the buffy layer coagulates as rapidly, or nearly so, as the lower parts rich in corpuscles?

This is indeed a question well worthy of careful study. We know that the liquor sanguinis left by the subsidence of the red corpuscles within a healthy vein is incapable of coagulating when shed, except in a slow manner, which is accounted for by the corpuscles that remain behind in it. Hence it appears that when the blood as a whole is shed into a glass, the agency of the ordinary solid leads the corpuscles to communicate to the liquor sanguinis, before they subside, a material, or at least an influence, which confers upon it a disposition to coagulate, though it still remains fluid for some time after they have left it. Just as we have seen that a very short time of action of the ordinary solid upon the blood as a whole is sufficient to give rise to coagulation, so we now see that, provided an ordinary solid be in operation, the presence of the corpuscles for but a little while is enough to make the liquor sanguinis spontaneously coagulable, though not immediately solidified. We shall see before concluding an illustration of the importance of this fact to pathology.

It remains to be added, that serous membranes resemble the lining membrane of the blood-vessels in their relations to the blood, as is implied by John Hunter's observation that blood, which had lain for several days in a hydrocele, coagulated when let out. The same thing is well illustrated in a frog prepared like this I now exhibit. About four hours ago, a knife having been passed between the brain and cord to deprive the creature of voluntary motion in the limbs and trunk, the peritoneal cavity was laid open in the middle line, and its edges being kept raised and drawn aside by pins, I seized the apex of the ventricle of the heart with forceps and removed it with scissors. In a short time the whole of the animal's blood was in the peritoneum, and it may be seen that it is still fluid in spite of this long continued exposure. When I first performed the experiment three years and a half ago, the weather being cool (about 45° Fahr.), and a piece of damp lint being kept suspended above the frog to prevent evaporation and access of dust, I found that the blood remained fluid in the peritoneal cavity for four days, except a thin film on the surface, and a crust of clot on the wounded part of the heart; but a piece of clean glass placed in the blood in the peritoneum became speedily coated with coagulum. Here it will be observed not merely the liquor sanguinis, but the corpuscles also were present in the serous cavity, yet no coagulation took place in contact with its walls.

I think it probable, though not yet proved, that all living tissues have these properties with reference to the blood. We know that the interstices of the cellular tissue contain coagulable fluid, and I have seen anasarcous liquid coagulate after emission; but this, indeed, may possibly have been merely liquor sanguinis, coagulating in consequence of slight admixture of blood-corpuscles from the wounds made in obtaining it.

Looking now at the principal results which we have arrived at, it must, in the first place, be admitted that the ammonia theory is to be discarded as entirely fallacious. The fact that this theory is exceedingly plausible, and has been supported by many ingenious arguments and experiments, is of course no reason why we should retain it if unsound. On the contrary, the more specious it is the more necessary is it that it should be effectually cleared away; for it mystifies the subject of coagulation most seriously; and I may say, for my own part, that it has cost me an amount of experimental labour of which the illustrations brought forward this evening convey but little idea. Still these have been, I trust, sufficient to show that the coagulation of the blood is in no degree connected with the evolution of ammonia, any more than with the influence of oxygen or of rest. The real cause of the coagulation of the blood, when shed from the body, is the influence exerted upon it by ordinary matter, the contact of which for a very brief period effects a change in the blood, inducing a mutual reaction between its solid and fluid constituents, in which the corpuscles impart to the liquor sanguinis a disposition to coagulate. This reaction is probably simply chemical in its nature; yet its product, the fibrin, when mixed with blood-corpuscles in the form of an undisturbed coagulum, resembles healthy living tissues in being incapable of that catalytic action upon the blood which is effected by all ordinary solids, and also by the tissues themselves when deprived of their vital properties.

These principles have, of course, very extensive applications to the study of disease; but I must content myself with alluding very briefly to inflammation, the most important of all pathological conditions.

If we inquire what is the great peculiarity of inflamed parts in relation to the blood as examined by the naked eye, we see that it consists in a tendency to induce coagulation in their vicinity; implying, according to the conclusions just stated, that the affected tissues have lost for the time being their vital properties, and comport themselves like ordinary solids. Thus, when an artery or vein is inflamed, coagulation occurs upon its interior, in spite of the current of blood, precisely as would take place if it had been artificially deprived of its vital properties. On one occasion I simulated the characteristic adherent clot of phlebitis by treating the jugular vein of a living sheep with caustic ammonia, and then allowing the circulation to go

* Since this lecture was delivered I have verified an important observation made by Schmidt—viz., that a given amount of corpuscles causes complete coagulation of only a limited quantity of hydrocele fluid. From this he draws the inference that the action of the corpuscles cannot be of the nature of fermentation, the coagulative efficacy of the corpuscles being not continued indefinitely, but becoming exhausted in the process of coagulation. For Schmidt's papers, see Archiv für Anat. Phys., &c., 1861 and 1862.

on through the vessel for a while, when, on slitting it up, I found its lining membrane studded with grains of pink fibrin, which could be detached only by scraping firmly with the edge of a knife. Again, comparing an inflammatory exudation into the pericardium or into the interstices of the cellular tissue with dropsical effusions into the same situations, we are struck with the fact that, while the liquor sanguinis effused in dropsy remains fluid, the inflammatory product coagulates. Now we know that in intense inflammation the capillaries are choked more or less with accumulated blood-corpuscles, which must cause great increase in the pressure of the blood upon their walls; and from what we know of the effect of venous obstruction in causing dropsical effusion of liquor sanguinis through increased pressure, we are sure that we have in the inflammatory state the physical conditions for a similar transudation of fluid through the walls of the capillaries. And the natural interpretation of the difference in the two cases as regards coagulation seems to be, that whereas in dropsy the fluid is forced through the pores of healthy vessels, in inflammation the capillary parietes have lost their healthy condition, and act like ordinary matter; so that the liquor sanguinis, having been subjected, immediately before effusion, to the combined influence of the injured tissue and the blood-corpuscles, has acquired a disposition to coagulate just like the buffy coat of horses' blood shed into a glass, or like the frog's liquor sanguinis filtered by Müller from its corpuscles, the injured vessels acting upon the blood like the filter.

This view of the condition of intensely inflamed parts is exactly that to which I was led some years ago by a microscopic investigation, the results of which were detailed in a paper* that received the honour of a place in the "Philosophical Transactions." It was there shown, as I think I may venture to say, that the tissues generally are capable of being reduced under the action of irritants to a state quite distinct from death, but in which they are nevertheless temporarily deprived of all vital power; and that inflammatory congestion is due to the blood-corpuscles acquiring adhesiveness such as they have outside the body, in consequence of the irritated tissues acting towards them like ordinary solids.

I cannot avoid expressing my satisfaction that this inquiry into the coagulation of the blood has furnished independent confirmation of my previous conclusions regarding the nature of inflammation.

# Lumleian Lectures.

ON THE

# FORMATION OF MUCUS AND PUS.

*Delivered before the President and Fellows of the Royal College of Physicians in Lent*, 1863,

BY THOMAS K. CHAMBERS, M.D.,

HON. PHYSICIAN TO H.R.H. THE PRINCE OF WALES, PHYSICIAN TO ST. MARY'S AND THE LOCK HOSPITALS, ETC.

## LECTURE II.

I DESCRIBED in my last lecture the mucous globule forming nuclei in its centre, and these nuclei splitting up into two or more, subdividing and separating the whole globule into several. From this it has been inferred that it is in this way that the globules grow—that they are, in fact, cells which multiply by subdivision. But I described also the formation of buds at the side of the globules. These buds commence by the granules of which the mass of the globule consists becoming gradually more visible and distinct, and forming centres of growth distinct and separated by a conspicuous interval from the central nuclei. They are not derivatives from the central nuclei, but new starting-points of growth. This is important, because it takes the globules out of the category of cells. In a fully-formed cell it is only the nucleus, and not the transparent area of formed matter, which grows; whereas here the whole substance grows and originates growth. The globules are, in fact, nuclei. Or we may more properly call them "nuclear matter;" for a nucleus must be a nucleus of something, whereas these are nuclei of nothing. Nuclear matter is that which is fitted to be the nucleus of something, unless arrested in its development—in other words, organic living matter in a condition to grow and multiply. A confirmation of this occurs in a drawing by Dr. Beale. When tissues are steeped in a weak solution of carmine the only parts which receive a permanent stain are the nuclei, or young growing matter in them. Now, of the mucous globules the whole substance receives a permanent stain, as is shown in the drawing here exhibited. It appears therefore to be wholly formed of nuclear or growing matter.

It may be remarked that the mucin, or transparent fluid medium in which the globules float, does not receive so marked and so permanent a stain from the carmine; and this appears a very fair argument for considering it as the formed substance of which the globules are the nuclei—a sort of common transparent area, a common cell-wall to numerous nuclei: just as coral is the common skeleton to millions of coral insects. Each perfect epithelial scale, each nucleus, has its own formed substance constituting its own cell-wall; in the lower grade of life represented by mucus there is a less perfect common formed substance, constituting a common cell-wall.

Now, if the mucin, or transparent medium in which the globules and granules float, stand in the place of fully-formed organic substance or cell, it will not retrograde into the condition of growing substance. Such a retrogression does not happen in cells. In an epithelial scale, for instance, the transparent area does not become nuclear matter. But it transmits the nutriment to the nucleus inwards through its substance without being destroyed. On this supposition, the formation of mucin will be the highest development of the life of the globule, for it answers to the formation of tissue from nuclear matter. And in that case we should expect to find that the nearer its normal condition the morbid secretion can be collected, the more of this higher state of life it would exhibit, and that the further from its normal condition it is, the less there would be of the formed matter. Such is the fact. The fluid which first forms on an inflamed surface contains few globules and much stringy transparent medium. Its nuclear matter has so far departed from life that it cannot form separate cells, but only an imperfect common area. But as the inflammation goes on, this power is still more and more lost; the nuclear matter cannot form the mucin, it can only multiply; and hence the stringiness of the mucus disappears, and it becomes what we know by the name of "pus." As far as the morbid matter itself is concerned, pus indicates in it a further deficiency of vitality than mucus—a deficiency of vitality shown first in its internal self-multiplication, and secondly in its non-production of mucin.

The question naturally arises as to how these products of arrested vitality make their way to the surface of the mucous membrane where we find them. The pabulum whence they are developed lies on the inner side of the epithelium, whereas we find them quite uncovered. The first explanation that occurs would be that the epithelium is destroyed, and that they are in the first place the *débris* of its dissolution, united to that which would normally go to form it. This would, in fact, be a modification of the old idea, that pyogenesis was a kind of ulceration, and involved a certain solution of continuity in a tissue. Indeed, it would amplify the idea, for it would extend its application to mucus as well. To this idea Professor Virchow seems to incline in the edition of his Cellular Pathology published in 1858 (p. 395), where he represents the formation indeed of the mucus and pus-globules to take place in the lower layers of the epithelium, but to be mixed with and to have their bulk added to by the outer layers which they push off.

Since then, however, several observers have found that the most intense catarrhal condition of mucous membranes may exist without any loss of the superficial epithelium. Even in that most destructive state commonly known as diphtheritic inflammation, where fibrin is thrown out with the pus, the epithelium may be perfect. Dr. Sanderson has kindly lent me some notes he made of the autopsy of a child who died at St. Mary's Hospital of diphtheric angina, in whose larynx this fact was very clearly seen. The whole interior of the organ was lined with a firm, closely adherent false membrane. When that was detached, portions of flabby concretion still remained, which could be washed off with a stream of water. "On examining the surface," says Dr. Sanderson, "after much washing, it is found to be *entire*. It exhibits to the naked eye, indeed, marked inequalities of appearance, as if eroded; but these must be dependent on the adhesion of minute particles

* On the Early Stages of Inflammation, Phil. Trans. for 1858.

of concretion, for, on making snips of the surface with sharp scissors at those parts where the eroded appearance was most obvious—viz., on the upper surface of the epiglottis, the epithelium was found to be entire. The only exception was at the upper margin of the ventricles, where the epithelium was adherent only here and there; but there was no trace of thickening or alteration of the basis-membrane, which exhibited its normal appearance."*

Förster† has also carefully examined, by both horizontal and perpendicular section, the epithelium of mucous membranes in a state of purulent catarrh, and has found in it either no change or very unimportant change from the normal state.

The globules, then, or the material of the globules, must somehow be passed through the epithelium. Dr. Buhl, of Munich, has lately detected it *in transitu*, and drawn figures of it on the road. The case on which his observations were made was one particularly well suited for the purpose. The patient had died of pyæmic inflammation of the portal vein and of the bile-ducts of the liver. Now, the epithelium of the bile-ducts presents a very marked character; its cylindrical bodies exhibit an unmistakable shape. So obvious is this shape that it can be detected even when considerably distorted; and therefore he was able to trace the epithelium scale, modified by what he rationally enough concludes to be the presence in it of pus-globules. This is clearly exhibited in his sketches of the various forms or stages of altered epithelium as he saw it floating loose in the fluid pus or massed into clots. First, he shows the normal epithelium cylinder, as a medium of comparison, and of these there were great quantities. Then come a number of bodies which we can recognise, when they are here placed in a row, as perversions of the cylinder, gradually increasing in rotundity and receding in likeness; but which in their extreme of dissimilarity would not be seen to have any connexion with it except by a previous knowledge of the fact.

FIG. 2.

(*After Buhl.*)

The majority of the enlarged cells were filled with oil-granules. Others, in which the fat was accumulated to a smaller amount, contained from two to ten rounded bodies exactly like the free pus-globules surrounding them—so like, that hardly any doubt could be entertained that they were cells pregnant with pus-globules. As a rule, the groups of pus-globules lay close to the thick end of the cylinder; but often between the thick end and the groups of pus-globules there was to be seen a degree of constriction, making the cell bottle-shaped. Sometimes the tail of the cell was obliterated or torn off, when it was almost globular, but even then capable of recognition.

In cells where there were only two or three globules the nucleus remained distinctly visible and perfect. In others the granular globules seemed to be dividing and splitting up into four or six, the original nucleus of the cylinder still remaining visible. So that pus-globules evidently do not of necessity take their rise in the degeneration of nuclei of existing tissue.

In other examples, again, the cell-contents seem entirely to have degenerated into fatty molecules, whether from the growth of the globules just described or from other causes, and in them the nucleus had degenerated along with the rest of the cell.

I have noticed in the epithelial scales from the vagina, in cases of purulent discharge, a somewhat similar repletion with granular matter without alteration of the nucleus. And mixed with them there were also large round granular corpuscles, which had the appearance of containing pus-globules, and which might have been degenerated epithelial scales. But scaly epithelium has not such a definitely marked form as the cylindrical variety, and it is difficult to identify it in a state of transmutation.

Remak* has also found in the pus from inflamed bladder large cells which he thought he identified as the epithelium from the fundus vesicæ. These contained from six to fifteen globules, entirely filling up the interior, and in every respect like mucus-corpuscles. But he does not trace a series of transitional forms.

It will be seen by these observations that the pus-corpuscles are not so much descendants of the epithelial cells as what may be called parasitic formations within them. They are parasites inside the epithelial cells, capable of increase by propagation within the tissue, just as on the surface the mucous globules were shown as parasites capable of increase by propagation without the tissue. And they grow quite independent of the true nucleus of the cell, and not derived from it. Thus the nuclear material may pass through the substance of the epithelial coat of mucous membrane without destroying it, and not only be itself unaltered, but may increase in quantity during the progress. This is one way in which the pus-material may reach the surface, and explains those cases in which the epithelium is quite uninjured.

It may strike us at first as a strange thing that bodies which we are in the habit of depicting with clear outlines as solids should pass through other bodies which our pencils enable us to draw only in the same manner, and which, as far as we can see, have no holes in them. But in point of fact, our eyes being uncorrected by our other senses, somewhat mislead us in this respect, and our minds have got to view these delicate gelatinous substances as more solid than they really are. These minute masses of living matter are, in truth, much nearer to fluids, from which the assumption of definite and regular forms alone distinguishes them. We are not in the habit of seeing fluids assume any definite form except that of the sphere under the influence of attraction, and when we see any modification in this spherical form we are apt to take it as evidence of the solidity of what we are looking at. We are apt, too, to associate the idea of separate and individual life with solid matter only. So that both grounds, both their imperfect spherical form and the impression they make of separate vitality, dispose us to regard these minute masses of living matter as solids. We should, I think, be careful to guard against such prepossessions, and should consider it as at least an open question, whether both epithelial scales and elementary globules may not possess rather the properties we attribute to fluids.

We find these fluid or semi fluid properties exhibited by epithelial cells in their daily duty of absorption. Fat, from its highly refractive powers, can easily be traced, though a fluid, by the microscope; and fat in globules can be seen passing through the substance of the epithelial cells of the intestines during their active state. This is well shown in some recent drawings, made by Balogh,† of intestinal epithelium during the ingestion of fat; the whole thickness, not a central tube, but the whole thickness, of the cell is seen permeated by it, and allowing it free passage. The physiological passage of fat-globules inwards may reconcile us to the idea of the pathological passage of pus outwards.

But Professor Henle well says: "If they are sometimes formed in the interior of a cell saturated with their material, this fact does not exclude the possibility that just in the same way they may sometimes be developed from the same plasma beneath the cells." In such case they would be projected on to the surface between the separated epithelium cells.

This other mode of growth and attaining the surface is strikingly shown in a drawing by Dr. Edward Rindfleisch, of Breslau,‡ which exhibits in section the nictitating membrane of a frog affected with a partial catarrh of the eyes. Fig. 3 is the normal state, where the *membrana propria* (as Professor Henle calls it) is seen as a moderately transparent layer, with its delicate areolar-tissue corpuscles, and the epithelium as two parallel rows of equal-sized cells. In Fig. 4 the pathological condition is represented: the pavement of epithelium is thrown up and separated by nucleated pus or mucus globules, which are seen to proceed from the membrane beneath. And the substance of this membrane appears to be saturated and rendered opaque by what must be an earlier condition of the same bodies.

These observations seem to show that the pus or mucus globule on mucous membranes is the material of young or re-

* Private notes of Dr. Sanderson.

† Communication from the Würzburg Institute of Physiology and Anatomy. Würzburger Med. Zeitschrift, bd. i., part 2.

* Virchow's Archiv, bd. xx., p. 198.

† Moleschott's Untersuchungen zur Naturlehre, bd. vii., 6tes heft.

‡ Virchow's Archiv, bd. xxi., plate viii.

novated epithelial cells, arrested in its development at the earliest dawn of life, before it has assumed the form of a cell, when it is as unlike its destined final form as an egg is to a chicken. They seem to show that in this state it may be thrown directly off by the epithelium being broken, or it may pass into the substance of the epithelium. In either case it does not part with the low degree of life it has acquired; but neither does it acquire a higher degree; it goes on propagating, but nothing more.

FIG. 3.

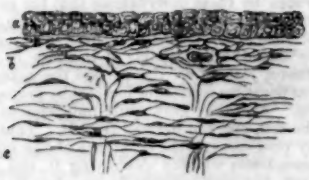
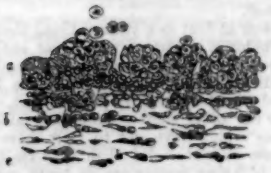


FIG. 4.



(*After Rindfleisch.*)

Both Buhl's and Rindfleisch's observations seem also to prove that pus-globules are not produced, or at least not produced only, by the degeneration of existing cells; they are not tissue retrograding into a lower form of life like fatty, amyloid, and similar morbid matter. Buhl's drawings especially exhibit the nucleus of the epithelial cell intact along with the newly-formed pus-globule. They differ, however, in one particular, that whereas according to Buhl the first pus globule produced free in the cell increases itself by division, Rindfleisch assumes a splitting up of the whole contents of the cell according to the analogy of the egg yelk. As Buhl's observations are made upon epithelium alone and Rindfleisch's upon areolar tissue also, and in one case the epithelium remained perfect and in the other was broken up, I can see no inconsistency in allowing both to be correct, and to represent the different behaviour of growing matter under different circumstances.

A very ingenious place has been selected by Junge* for the investigation of the growth of pus—viz., the tunic of the aqueous humour in the eye. He caused inflammation by the application of a hot wire to the cornea of an animal, and was thus able to see what went on in the deeper parts of the eye without exposing the affected tissue to the air or any other extraneous agency. He was thus able to see the active proliferation of globules by division and subdivision so far as the formation of large masses.

As the secretion on the surface of mucous membranes becomes more opaque or "purulent," so the globules are more and more regular in size, rounder, and more like one another. In transparent mucus most of them are oval, with nuclei indistinct and various in number, while there are often lumps on their sides distorting the form. In creamy pus they are nearly all of a size, and present two or three well-marked nuclei. This is easily accounted for, if we admit that they are multiplied on the surface of the membrane. When first formed, they appear under violent and varying circumstances, different in degree every moment, and therefore are different in form; but when once separated they may go on multiplying under favour of nutriment and heat for several generations. Thus, like wild races of animals, they lose individual differences, and become more and more similar and uniform in characteristics.

The formation of pus in deep-seated parts is, of course, not so easy to trace as on surfaces, and experimenters seem deterred by the difficulty of the subject. In all tissues where pus is found, its optical characteristics are the same as the fully formed pus of mucous membranes: it presents globules all nearly of the same size, and with a pretty even amount of nuclei. This is its complete condition; but what it is like immediately on its separation we do not know. We cannot trace it through a stage analogous to mucus.

Of its previous condition, however, we may form a shrewd conjecture. The same elementary substance which appears on, or rather in, integumentary tissues as the common material of the various kinds of epithelium, appears also as granular nuclei in other tissues—in the ganglia of nerves, in the brain, in the parenchyma of the liver, in the spleen, thyroid and thymus, &c. The same bodies occur also in the blood, where they have been termed "chyle-corpuscles" and "white cells." They are found in largest quantities in the most recently formed, most quickly growing, and most actively renewed component parts of the animal frame. In short, the most rational interpretation of this form of organic matter is that which represents it as the common material of all tissues in its earliest state of elementary life. And as that which was to have formed epithelium is cast off as the basis of the mucus and pus globule, so that which was to have formed hepatic parenchyma, nerve, or areolar tissue becomes pus, perhaps through some unsuspected transitional stage.

In this account of organic forms in pus and mucus I have endeavoured to harmonize the contributions of several observers. I have done this mainly by omitting points of observation and deductions in which they differ from one another, and putting together those on which they agree. Their harmony also has been much assisted by translating into a common language the various terms in which they express the laws of life which their observations appear to exhibit. It is curious how often plain English reconciles difficulties; and I cannot but think the proverb which assigns "*longa verba longis auribus*" quite as applicable to physiology as to social life.

* Uber Eiterbildung, &c.: Archiv für Path. Anatomie und Physiologie, bd. xxii., heft 1, 2, p. 109.

## CAVITY IN THE LUNG, WITH EMPYEMA;

### OPERATION OF PARACENTESIS THORACIS; RECOVERY.

UNDER THE CARE OF

J. E. POLLOCK, M.D.,

PHYSICIAN TO THE HOSPITAL FOR CONSUMPTION, BROMPTON; AND

E. SYMES THOMPSON, M.D.,

ASSISTANT-PHYSICIAN TO THE HOSPITAL FOR CONSUMPTION AND TO KING'S COLLEGE HOSPITAL.

AN Australian gentleman, aged twenty-nine, two of whose uncles and one brother had died of phthisis, having suffered twice from spitting of blood, feeling ill, and having lost flesh for several months, left Sidney in February, 1862; had a return of hæmoptysis at Aden, but went up the Great Pyramid, and returned to Cairo in a high fever; was cupped and leeched in the right hypochondrium for supposed hepatic inflammation, and told that the right lung was pushed up by an enlarged liver; was kept on barley-water for a week, and then put on board ship. Hæmoptysis returned, but ceased under tincture of iron and cod-liver oil. On arrival in London, April 23rd, he was much exhausted; did not think he could have lived three days longer on board ship; was very thin and flushed, perspiring profusely at night; pulse above 100; respiratory movement confined to the left side. Right side behind absolutely dull on percussion below the spine of the scapula; above this slightly resonant; feeble respiratory murmur audible along the spine almost to the base; respiration tubular in the supra-scapular fossa. In front the dulness extended to two inches above the nipple; two inches higher than this it was rather dull, but above this very resonant, with tubular breathing and bronchophony; voice-sounds almost absent in the dull part. Left side posteriorly very resonant; respiration loud and harshly puerile; at the base, and round to the axilla, crepitation at the end of inspiration; expiration at the apex of the left lung of a blowing character, loud and prolonged; vocal resonance increased. Circumference of chest on a level with the nipple, left side, 18½ in.; right, 19½ in.

Under iodide of potassium the circumference of the side diminished half an inch, and the extent of dulness decreased. The pulse fell in one day under ozonized cod-liver oil from 100 to 91. No further diminution occurred in the extent of dulness or degree of mobility of the right side, but a swelling and doughiness of the skin from the lower margin of the ribs to the axilla appeared;* and on May 8th fluctuation became apparent in the eighth intercostal space.

* There was some hardness and tenderness on the eighth rib, like a node. The patient had been treated for syphilis when in Sydney.

Mr. Henry Smith, being called in consultation, carefully introduced a grooved needle, in a direction obliquely upwards and inwards, about five inches below the nipple, at the point where tenderness and fluctuation were first observed. A drop of pus appearing in the groove, a small trocar and canula was introduced, and about half a pint of thick inoffensive pus, mixed with blood from the wound, escaped. After the operation the patient appeared relieved, and passed a good night. A few drachms of matter escaped from the wound.

During the following week the fluid again collected, the breathing became hurried and difficult, and a second operation was determined upon; but the patient was seized with retching, and coughed-up a pint or two of glairy fluid from the stomach. The exhaustion from the coughing was so great that the operation was postponed. The following night a large quantity of serous fluid—at least a quart, probably more—escaped from the puncture in the side: the respiration then became easy, the dulness diminished, and the breath-sounds were audible in front even to the line of puncture, and behind quite to the base of the lung. The breathing was very bronchial in character near the spina. Humid crepitation was audible at the base and beneath the clavicle on the left side. The expectoration was considerable (about one pint per diem) in quantity and very offensive, nummular, and containing large masses of pulmonary elastic tissue. To take quinine and nitric acid; five glasses of sherry (Amontillado), and a plentiful supply of animal food.

Early in July large gurgling crepitation and amphoric breathing were observed below the right scapula in the place of the bronchial breathing previously noticed. A blister applied over this part, and kept open for several weeks with savine ointment and Albespeyre's plaster, gave relief to the cough, and the expectoration diminished to five or six ounces in the twenty-four hours. On several occasions, after two or three days of comparative freedom from cough and expectoration, a mass of glutinous matter, like croupal membrane, was coughed up, followed by a profuse discharge (half a pint or more) of purulent matter, coming evidently from the right side, as indicated by the diminished dulness and increase in gurgling sounds, amphoric voice, and respiration on the side of the spine between the base of the lung and angle of the scapula; breathing all over the left side puerile, except at the apex behind, where it was jerking, almost crepitant. To check the expectoration the potassio-tartrate of iron, and afterwards iron-alum, were prescribed; then cocoa-nut oil was given, but being followed by nausea and sickness it was discontinued after a few days. The acetate of lead was then given in doses of two, and afterwards three grains, twice a day. The expectoration diminished in quantity under this treatment; but constipation with colicky pains occurring, it was discontinued. The urine then became scanty and high-coloured, and the legs œdematous. Under dry cupping, jalap powder, and diuretics, the renal secretion increased; but the legs remained swollen for several days. Quinine and cod-liver oil (half an ounce three times a day) were continued.

Towards the end of October, after a drive,—the patient had taken carriage exercise for several weeks,—catarrhal symptoms set in, followed by oppression in the breathing and wheezing all over the chest. The expectoration, at first frothy, became, after a week, more purulent and pellety, containing lung-tissue, previously absent for weeks; gurgling and tinkling reappeared below the right scapula, and the pulse rose to 84 (from 68). After a few weeks the moist sounds diminished; sometimes they disappeared altogether for two or three days, and the expectoration almost ceased, preceded by slight febrile symptoms, and after a severe coughing a plug of gelatinous matter would be coughed up, and the mouth become filled with offensive matter; the feverishness would then abate, the expectoration gradually lose its fetid odour, and return to its usual amount.

The opening in the side closed permanently about the 1st of February (eight months after the operation), the discharge having been very scanty and gradually diminishing for months. The opening had previously closed temporarily for two or three days. The gurgling sounds and cavernous breathing were now confined to a limited space near the angle of the shoulder-blade. The patient gained flesh, and on March 3rd weighed 11 st. 4½ lb.; being an increase of more than a stone in three months and a fortnight. In the second week of March the expectoration gradually changed in character, and lost its red hue; and about a tablespoonful of frothy mucus, containing scarcely any pus, was spat up. For the first time during his illness the patient was able to lie on either side; and in place of the previous gurgling and amphoric breathing, a distant "soap-bubbling sound" could alone be detected. In the axilla there was gurgling with succussion on coughing, as though fluid intervened between the lung and ribs. The percussion note was fairly resonant throughout. At the end of March the splash was replaced by an indiarubber-like creak of less extent, and after a few weeks this also ceased. Pulse 64; breath easy; appetite good (e.g., two chops and an egg for breakfast).

He went to Torquay for a fortnight, and on his return (April 20th) he was perfectly well; and, with the exception of a creaking sound heard in the axilla on deep inspiration, the *chest-sounds* were quite *normal*.

The preceding case seems to be of sufficient interest to warrant its publication, especially as the physical signs were verified and the progress of the case watched throughout by two competent observers. The patient has, within the last few weeks, been carefully and separately examined by both Dr. Pollock and Dr. Thompson, who have failed to discover anything abnormal in the chest beyond a diminution in circumference of the right side of nearly three-quarters of an inch, and a slight difference in the resonance on percussion on the two sides.

Several questions naturally suggested themselves during the progress of the case:—

1st. Had the pleuritic effusion any connexion with the periosteal affection of the rib, and was it syphilitic in its origin?

2nd. Did the *serous* fluid which escaped in such large quantities from the aperture in the side, which had previously given egress to *pus*, come from a different source, or was it secreted in the same cavity as the matter first observed? In other words, was the abscess which pointed beneath the eighth rib, and which was punctured, a limited empyema subsequently communicating with the general pleural cavity, or was it a single cavity secreting at first pus, and then serum?

3rd. What was the character of the pulmonary consolidation which passed through the stages of softening and excavation, and then healed, leaving no trace distinguishable by auscultatory signs?

In the treatment the good effect of blisters kept open constantly for weeks, and of cod-liver oil, which was scarcely intermitted for nine months, was very remarkable. Much must also be attributed to care taken in securing a constant supply of fresh air, and in maintaining a high and sufficiently stimulating diet to support the strength under the constant drain, amounting, for several months, to more than a pint of pus per diem.

The existence of well-marked humid crepitus in the left (opposite) lung, its disappearance, recurrence, and final replacement by healthy respiratory sounds, is very remarkable, and, on the supposition that the case was one of tubercle, is evidence of the possibility of the complete removal of all physical signs of deposit in the lung.

The history, the family predisposition, the hæmoptysis, hectic, and the physical condition of both lungs, may not unfairly be referred to a deposit of tubercle, softening, producing excavation, and terminating in recovery. But it is also possible to account for the case on the supposition of an acute pleuro-pneumonia producing empyema and consolidation of the lung, with excavation, and that the cavity was a pulmonary abscess. On comparing these two suppositions, that of phthisis is more probable, and is favoured, as above stated, by the condition of the opposite lung. The perfect recovery of health, and the entire disappearance of the physical signs in both lungs, are unusual in either case.

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## ON A CASE
OF
## COMPOUND COMMINUTED FRACTURE OF THE RIGHT THIGH AND SERIOUS INJURY TO THE LEFT LEG,

THE RESULT OF A TIMBER WAGGON PASSING OVER BOTH LIMBS; RECOVERY.

BY JOHN TUDOR, ESQ., M.R.C.S.,
SURGEON TO THE DORSET COUNTY HOSPITAL.

G. L——, aged sixteen, was admitted into the Dorset County Hospital March 18th, 1862, with a compound comminuted fracture of the lower third of the right femur, and a contused wound of the inner side of the left leg and thigh. From the history it appears that, whilst riding upon the front

of a timber waggon laden with about five tons' weight of timber, he fell down behind the horse and between the fore-wheels, and in attempting to escape by the side from under the waggon one of the hinder wheels passed over both his legs. He was taken home some distance, and attended to by a medical man, who found the patient suffering from a profuse hæmorrhage, proceeding from a ragged wound in the lower and back part of the right thigh, at the upper boundary of the popliteal space, caused by the protrusion of the fractured ends of the bones. There was some trouble in checking the bleeding, and hare-lip needles were made use of, several being passed in different directions through the wound, which was brought together by twisted sutures. The accident occurred late in the evening, and the patient was not brought to the hospital, a distance of about twelve miles, until the next day.

On admission he was in a state of great prostration from pain and loss of blood. A long splint was very carefully applied with a many-tailed bandage, and the limb placed upon pillows; stimulants, beef-tea, and opium being ordered. The following morning, in consequence of the increasing tension, the needles were removed, when a considerable quantity of decomposed blood and serum escaped, with fetid gas; whilst the lacerated hamstring muscles protruded through the wound. It was now apparent that a splint could not be used in consequence of the damaged state of the limb, and the impaired vitality, which seemed to threaten gangrene. The splint was therefore removed, and the limb merely laid upon pillows, which were covered with waterproof material, and so arranged as to allow an interval corresponding to the position of the wound, which was surrounded with water dressings, the whole being steadied by means of long sand cushions.

In a few days there was sloughing of the wound and cellular tissue in the course of the muscles, with foul discharge; also diffuse suppuration beneath the integuments, extending up to the trochanter. This was freely opened. Upon the inner side of the left leg there was a contused wound, about seven or eight inches in length by about three in breadth, extending above and below the knee, which in the course of a few days assumed a very unhealthy character. Early incisions were made; but the entire surface sloughed, completely denuding the muscles and tendons of the part. The knee in the meanwhile had been flexed to an acute angle to relieve pain. This was remedied as soon as possible, and the joint retained in a straight position. The wound was dressed with broad strips of lint, spread with resin cerate, which were carried round the circumference of the limb, and clothed with cotton wadding.

For a week or ten days the patient took little or no nourishment, and was sustained chiefly upon brandy and opium, his condition being most critical. In consequence of the large amount of discharge from both limbs, and of its offensive character, considerable difficulty and trouble was experienced in the dressing. This, however, was much diminished by the use of a double-framed bed, the sacking of which was made up of bands four inches in breadth, fixed at the sides, and movable at will. Two or three of these bands were removed as required; and when the upper part of the bed-frame was raised in the ordinary way, the fractured limb could be washed and dressed from below. It, however, required great care to prevent the fractured extremities doubling upon each other, and thus protruding through the wound. This was obviated partly by the arrangement of the pillows and by the use of a double perineal band fixed to the head of the bed, whilst the foot, carefully covered in thick folds of cotton, was secured by a broad bandage to the bottom of the bed. Little else could be attempted for some time than to dress the wounds and induce them to heal, and to support the patient's strength. No effort was made to apply a splint until a sound healthy nutrition was re-established.

At the end of two months some callus was developed, and the wound contracted. Support was now given by means of gutta-percha applied to the anterior surface. Everything henceforward progressed favourably, and about the beginning of the fourth month the patient could raise the limb slightly. Loose bone was now discovered through a sinus opposite the seat of fracture. The cicatrix was opened, and a portion of the shaft of the bone, about an inch and a half in length, with several smaller pieces, were removed.

The patient was discharged on the 18th of October, with a very useful limb; a high-heeled boot compensating for the loss of length.

A few points as to the immediate treatment of such a case seem to suggest themselves for consideration. As to the best mode of checking the hæmorrhage, of course any vessels within reach should be ligatured or twisted; but as there would in such an extensive injury be rupture of many small vessels, arteries as well as veins, impossible to control by such means, and from which extensive hæmorrhage may take place, we must resort to pressure; and the method most suitable seems to be the introduction of narrow strips of oiled lint within the wound by means of the finger, so as to completely fill it from the bottom; a compress should then be applied, and secured by strapping or a few turns of a bandage, due regard being observed as to the amount of pressure used. There seems to be an advantage in using oil: the lint can be more readily introduced, and it adapts itself more easily to the interstices; moreover, I believe it has a soothing effect, and, what is important, the lint can be more readily removed without causing a recurrence of the bleeding. The use of sutures in lacerated wounds rarely or never answers, more especially where the surrounding parts have been much damaged and the wound is deep. Hæmorrhage goes on within the wound, and the effused blood finds its way into the cellular membrane and between the muscles, in many instances decomposing and causing the death of already damaged tissues, besides exerting an outward pressure which must greatly aggravate the mischief already existing in the integument itself.

The importance of early attention to the position of the left limb, and in straightening the knee, must be obvious. Nevertheless it is remarkable how often this rule of treatment is overlooked. The records of orthopædic surgery doubtless could exhibit many instances of such cases; whilst I myself have operated upon several deformities arising from a similar cause.

Dorset, August, 1863.

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ON A CASE OF

# INGUINAL HERNIA TREATED SUCCESSFULLY ON PROF. CHISHOLM'S METHOD.

BY JAMES J. DICKINSON, ESQ.,
ASSISTANT-SURGEON, BENGAL MEDICAL SERVICE.

THE very great interest that attaches itself to every successfully treated case of inguinal hernia by the radical methods introduced by Prof. Wütz̈er and Mr. John Wood, induces me to believe that the publication of the subjoined case may prove acceptable to the profession at large—1st, on account of its complete success; 2ndly, because it is simpler than either Wütz̈er's or Wood's, as will be hereafter shown; and 3rdly, as I am under the impression the operation has as yet been but rarely, if ever, performed in India.

The man who was operated upon was a Bhelstee, aged thirty, and his history is as follows:—He was ruptured in the cold season of 1856, in consequence of slipping while descending a steep hill near Cashmere. Immediately he felt as if something had given way, and on placing his hand over his right groin, discovered a small tumour there. This gradually increased in size, took a downward direction, and ultimately descended into the scrotum. He states that from the day of the accident till within a few days of having the operation performed he has regularly pursued his avocation, and that, with the exception of one or two obstinate attacks of constipation, he has enjoyed uninterrupted good health.

When he first presented himself to me in April last, I lost no time in writing off to my friend, Dr. Bourne, to get me a needle constructed similar to the one described by Professor Chisholm; but from the time it necessarily takes to get anything made in India as compared with England, some slight delay occurred, and we were ordered to march from Segoolee to Gwalior, a distance of 500 miles. The man, however, was so anxious to have the operation performed, that he marched the whole of the way with us!

On examining him, I found he had a large inguinal hernia of the right side, which completely filled the scrotum. With gentle pressure the whole of the gut could be easily returned; and on pushing the flabby scrotum up before the forefinger, it could be passed through the tendinous aperture, more than an inch in diameter, into the abdomen, and the pillars of the external ring could be distinctly felt. The man himself was a spare man, though in good condition; and I mention the fact because I am of opinion that *pari passu* with stoutness, so will the difficulty of the operation be enhanced, and so will needles of various sizes and curves be required.

On the 27th of May I performed the operation, having on the previous day given him a dose of castor oil. After the case

had been carefully examined by my friends, Assistant-Surgeon Jackson, of H.M. 13th Light Infantry, and Dr. Caird, of the Camel Corps, by both of whom I was ably assisted, I proceeded to operate, the patient being under the influence of chloroform. The mode of operating is as follows: "The scrotum having been invaginated upon the finger, as the only mode of guiding the needle in its passage, a long strong curved needle, fixed firmly in a handle and armed with silver wire, guided by the finger, transfixes the scrotum at the apex of the invaginated portion, passes through the internal column, and appears through the skin of the abdomen, when one end of the wire is drawn out. The point of the needle is then drawn backwards, and disappears again in the canal. Its direction is then changed. Whilst still embedded in the scrotum and guided upon the finger, its point is made to traverse the external column of the ring near Poupart's ligament, lifting the skin of the abdomen. By gliding the skin upon the needle, the point appears through the small puncture made by the first passage of the needle, when the other end of the wire is seized, and the needle is unarmed and withdrawn through the scrotum. The finger is now removed from the canal, and the two ends of the wire being drawn upon the loop, it dissects the cellular tissue up to the columns, which it hugs closely. By twisting the ends of the wire the columns are felt approaching, until they are brought into such close apposition as to allow nothing to pass between them; the spermatic cord in its exit filling up all the available space remaining of the ring. When the ring is felt closed, the twisted wire is drawn firmly outwards, and clipped off as close as possible to the skin, so that when traction on the skin of the abdomen is removed, the gliding back of the integuments to their normal positions conceals completely the ends of the small loop of silver wire." This is the description of the operation as given by Prof. Chisholm. The operation which I performed was, but with one slight modification, precisely similar. Those who witnessed the operation were much struck, on passing their forefingers up the canal, to find how very distinctly the pillars could be felt approximating as the wire was being tightened; and when it was tied, and the ends cut off, a perfect plug could be felt, presenting an impassable barrier to the egress of any portion of gut.

The progress of the case was everything that could be desired. For the first two days there was slight pain over the abdomen, which was subdued by small doses of opium; and there was also a good deal of thickening of the cord, which subsided after a time. The small wounds healed slowly; nor need this surprise us when we remember that the thermometer stood at 105° in the house.

On the thirteenth day after the operation he was able to rise from his bed and obey the calls of nature; and on the twenty-fifth day he walked from the hospital to my house and back again, a distance of a mile and a quarter, without suffering much fatigue. On the 20th of June (twenty-four days after the operation) he was discharged, being at that time able to draw as much water from the well as he required for his own use.

*Remarks.*—The operation as performed by me differed in one point from Prof. Chisholm's—viz., that instead of puncturing the scrotum at once with the needle, I made a slight incision with a scalpel through the fascia of the scrotum, and then passed the needle in. This suggestion emanated from my friend Dr. Jackson, who believed that it would render the performance of the operation less obscure, an opinion in which I agree. The only difficulty in the operation is, after having secured the inner pillar and withdrawn the needle, to secure the outer pillar, which requires a peculiar manœuvre. I think it should be secured a line or two lower than recommended by Professor Chisholm, thereby obtaining a more perfect approximation of the parts by reason of the greater purchase that is acquired.

The needle I use is six inches long, and firmly fixed into a handle, in appearance resembling a common suture needle, having, however, on its convex surface a groove sufficiently deep for the silver wire to be perfectly embedded in, and thus avoid a resisting surface, which would be the case were this groove not there. I would recommend intending operators to have a set of four needles, similar to those my friend, Dr. Bourne, is having constructed for me, and from whose firm (Messrs. Bathgate and Co.) they are obtainable. I have purposely avoided commenting on the class of people for whom I think this operation applicable, as from a solitary though successful case it would be all but impossible to draw any inferences, and were we to do so they could only be regarded in the light of postulates.

In conclusion, the question will be naturally asked, Does this operation of Professor Chisholm's present greater advantages than either Wütz er's or Wood's? My answer is, Yes, it does. And I think a careful perusal of the three methods will satisfy practical surgeons of the truth of my assertion. First, it is superior to Wütz er's on account of its greater simplicity by reason of the absence of all complicated apparatus (no mean point to be borne in mind by military surgeons stationed hundreds of miles away from any city), as well as in the procedure itself; secondly, on account of the permanency of the plug, due to the presence of the silver wire always remaining there; and, thirdly, no truss being required in the after-treatment. With reference to Wood's operation, of which it may really be considered a modification, I think hereafter, when we have more data to go upon, that if it does not altogether supersede it, it will at least be found to have a sufficient number of advocates to entitle it to rank amongst the legitimate operations of the day.

Gwalior, July, 1863.

## DEATH FROM PRESSURE.

By WILLIAM STORY, Esq., F.R.C.S.

THE following accident occurred on board the ship *Norfolk*, on her passage to England from Australia. I have not heard or read of a similar catastrophe:—

On the 25th of February, 1863, two men named William Joyce and Isaac Watkins were sent aloft to rig out the top-gallant studding-sail boom; and while in the act of so doing, a tremendous roll of the ship caused the main-topsail tie to part, the tie being an iron chain of three quarters of an inch. The men were standing on the foot-rope, and when the snap took place they instinctively seized hold of the yard, and were instantly rolled up in the folds of the sail, the topsail yard being one of "Cunningham's patent self-reefing yards;" in fact, they revolved round the yard just as a fly might be caught in a patent spring window-blind, and were enveloped as rapidly. The tie parting on the fore side caused the yard to revolve forwards, which would not have been the case had the tie parted on the aft side; it would then have revolved backwards. But the most singular circumstance is, that alongside of the yard is what is called the chafing-yard, being only six inches from the yard itself, and the men wrapped in every fold of the sail had to pass, every time the yard revolved, between this yard and the yard itself. At first sight it would seem that every bone in their bodies must have been crushed; yet this was not so. When the yard fell on the cap, which it could not have been more than one second in reaching, both men were alive, although surrounded by four or five folds of the sail; and to show the fearful pressure they must have undergone, one man's head and shoulders had burst through the canvas being nearly a new sail. An idea of the pressure may be gained by putting a narrow piece of tape once round the finger, when very little pressure is felt; but add five or six turns, and the pain becomes unbearable. On being cut out of to them their winding sheet, as I said above, both were alive. Watkins died while being lowered to the deck in a sling, and carefully guarded by two of his mates. On examining his body, which I did twice, I was surprised to find only a comminuted fracture of the left thigh bone, without any external abrasion or wound. His ribs were perfect, and the appearance was that of suffocation. The other man (Joyce) was perfectly sensible, but pulseless, cold, and clammy when I examined him, which was after he had been put into the captain's swing cot. He said he felt something burst in his belly. Everything was done to promote reaction, but without effect, and he sank nineteen hours after the accident, perfectly conscious. The only injuries I could detect were a comminuted fracture of the right thigh bone, and an abrasion of the skin over the right temporal region, where his head had burst through the sail.

And now comes the question, How is it only one bone in each man's body was broken after having passed several times through two rollers, almost similar to a patent mangle, only of gigantic dimensions? On instituting further inquiries, I ascertained that the chafing yard would possibly give from four to six inches as the bodies passed between it and the main yard. This would give from ten to twelve inches at most as the space through which they passed. Death seemed to be from intense shock.

It would have been satisfactory to have made a post-mortem examination, and I made a request to the captain to this effect; but from the severity of the weather, and the superstitious fears of the sailors, he begged of me not to do it. Not the

slightest blame is attachable to anyone. The chain was proved in Messrs. Wigram's yard, and found equal to a strain of six tons, the main yard weighing about two tons. That it should have parted just as these men were rigging out the boom, which occupies but a short time, is not a little singular, and verifies the old adage, that "in the midst of life we are in death."

## REPORT OF A CASE OF AMPUTATION OF THE SHOULDER-JOINT.

RECOVERY.

BY TREVOR MORRIS, JUN., M.D., M.R.C.S.

A. J——, aged seventeen, employed under a tape-weaver, while placing over a pulley a strap which worked the loom, had the sleeve of her dress caught by it, and her arm broken off just above the elbow-joint, lacerating the soft structures to a frightful extent quite up to the joint on the inner side of the arm, giving much the appearance of a "cat-o'-nine tails." Looking up to the ceiling (where her arm had been carried) at the moment of the accident, she exclaimed to her fellow-work-girls, "Why, girls, there's my arm!" She then fainted. The accident occurred at six P.M. At half-past six I saw her. There was then no hæmorrhage, but she had lost blood to some extent, and was suffering from severe shock, and it was evident nothing could then be done. Stimulants were administered, and she was carefully watched, and after some hours she rallied. A glance sufficed to satisfy me that nothing but amputation at the shoulder-joint was available, which was to be done as soon as she should have sufficiently recovered. I saw her at half-past eleven P.M., and as she had then power enough, it was decided to operate without delay. From the severe laceration on the inner side of the arm, which extended beyond the joint, there was but one course to be adopted, which was to get all available material, so as to form one large outer flap.

At twelve P.M., I put her fully under the influence of chloroform, and commenced the operation by making a large elliptical flap from the outer and posterior surfaces of the arm. This was dissected up, and the joint exposed and cut into; the head of the bone was now turned out, the knife carried through the joint, and made to cut its way out through the lacerated tissues on the inner side. The artery was immediately secured. Probably from the effects of chloroform and stimulants combined, a state of extreme depression came on, with vomiting; the former after a time was relieved by hot iron plates to the axilla, præcordial region, and feet. Lest hæmorrhage should come on after reaction had become fully established, the flap was merely brought forward and retained by a bandage. An opiate was then given, and she slept until six A.M., when she awoke, not knowing that the operation had been done. The flap was now adjusted, sutures employed, with strapping, and the part covered with wet lint, on which chloroform was sprinkled, and not once throughout the case was pain complained of. Some little sloughing occurred; but the girl was out in three weeks, and can now do most things with her one arm.

In this instance I had the very able assistance of my uncle, Mr. W. W. Pearce, to whom in no small measure is due the rapidity with which the operation was performed.

Measham, Ashby-de-la-Zouch, July, 1863.

OSTEO-PERIOSTEAL RHINOPLASTY.—M. Ollier, of Lyons, well known by his successful investigations touching the regeneration of removed bone through the agency of the periosteum, has lately brought before the Medical Society of Lyons a case in which he performed rhinoplasty in a manner different from the mode usually adopted. To avoid the falling in of the parts, which generally takes place when simply the soft tissues are brought down from the forehead, he made use not only of the periosteum of the os frontis with his flap, but detached one of the ossa nasi, and led it downwards, to afford support to the newly-formed nose. From M. Ollier's description, it would appear that the new organ adhered perfectly to the surrounding parts, and was of a very satisfactory shape. He accounts for the absence of necrosis of the denuded os frontis by the absence of inflammation.

# A Mirror OF THE PRACTICE OF MEDICINE AND SURGERY IN THE HOSPITALS OF LONDON.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum, et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

## KING'S COLLEGE HOSPITAL.

POLYCYSTIC DISEASE OF THE RIGHT OVARY; EXTENSIVE ADHESIONS TO THE INTESTINES AND MESENTERY; OVARIOTOMY; ULCERATION THROUGH THE WALLS OF THE BLADDER; FATAL RESULT.

(Under the care of Mr. HENRY SMITH.)

IN placing upon record a third instance in which ovariotomy was resorted to at this hospital, we would draw attention to the escape of urine through the abdominal wound. This was an occurrence of the gravest import, yet readily explained as the result of the disruption of some of the adhesions existing between the ovarian tumour and the bladder, no doubt giving rise to inflammation and perforating ulceration. A wound of the bladder during the operation is quite out of the question. It is one of the first cases, moreover, in which urine has passed through the wound in the abdomen; but it is not more surprising than the passage of faces under the same circumstances, an instance of which we recorded as having occurred in a case under the care of Mr. Baker Brown at the London Surgical Home, but which fortunately ended in a good recovery.

Mrs. P——, aged thirty-eight, married, and the mother of five children, was admitted into the hospital May 26th, 1863. She states that five years previously she fell down stairs, after which she first noticed a lump on the right side of the abdomen. This was followed by considerable pain for some months, but it gradually subsided, and the swelling increased in size until about ten months ago, when an opening was made into the tumour by a surgeon about an inch above the navel, and a quantity of green matter came away. Three weeks subsequent to this a second puncture was made lower down, but only a very small quantity of fluid came away, and there has been an opening in this situation ever since.

Her condition on admission was as follows. There was a hard well-defined mass of considerable size in the centre and right side of the abdomen, extending from the lower border to as high up as the tenth rib. Near the centre of the tumour, and to the left of the umbilicus, a sinuous opening existed, which freely discharged a fluid composed partly of the ordinary ovarian fluid and pus. This was the site of the last made puncture. A little above this was a firm cicatrix, the point where the first puncture was made. There seemed to be a line of demarcation on the right side between two portions of the tumour. The entire tumour was pretty movable, and its lateral boundaries were very clearly defined just over the part where the original puncture had been made. The skin appeared to be firmly adherent to the tumour. The uterus was healthy, but retroflected.

This woman's general condition was very bad; she was wretchedly thin and debilitated, and suffered continual pain in the abdomen; and there was a constant drain from the opening before mentioned. The tumour was diagnosed to be ovarian, probably polycystic, and of a semi solid character.

The patient was placed in one of the medical wards under the care of Dr. Johnson, and was ordered plenty of good nourishment, and iron and quinine. Under this treatment she improved considerably in her health, but the discharge was as abundant as ever; and, as it was evident that any dealing with this opening would not affect the mass of the tumour, the propriety of ovariotomy was considered, and the case was transferred to the surgical wards, and placed under the care of Mr. Henry Smith. The operation was decided on, but at the suggestion of Mr. Baker Brown, who saw the patient, a delay

of a week was allowed in order that she might have a succession of warm baths.

At two P.M. on June 27th the patient was brought into the theatre, the rectum and bladder having previously been thoroughly emptied by an enema and the use of the catheter, and the operation was performed by Mr. Henry Smith in the following way:—An incision was made about an inch above the umbilicus, carried down to its left and then into the mesial line to the extent of four inches. After the peritoneum had been slit up the tumour was partly exposed, but it was covered for three-fourths of its surface by, and adherent to, the omentum. This with some difficulty was separated by the fingers, and the upper and lateral surfaces of the mass were then fairly exposed. A large trocar was now thrust into it, but nothing came away, and on removing the instrument its extremity was found to contain some thick gelatinous fluid. It being evident, therefore, that the bulk of the mass could not be lessened, Mr. Smith, at the suggestion of Mr. Fergusson, lengthened the incision in the abdomen, and was able to get his hands behind the tumour, when it was found to be adherent on all parts to the intestines and mesentery. At this stage it looked as though the proceeding must be abandoned, but by the cautious use of the knife here and there, and by steady manipulation, the adhesions were entirely and safely broken down; the pedicle, which was not broad, was then found, the clamp was readily applied, and the tumour was removed. Only two ligatures were required for bleeding vessels, and the patient was placed in bed in very fair condition considering the prolonged and formidable operation which she had undergone. The tumour when removed was about the size of an adult head, and was composed of several cysts, both large and small: in the latter was the ordinary thin serous fluid, but the contents of the former consisted of a thick gelatinous fluid, which would not flow out when an incision was made; so that, practically speaking, the tumour was solid.

28th.—Ten A.M.: The patient has had but little shock after the operation, although she has vomited a great deal. She has dozed much during the night. A suppository of opium and hyoscyamus was administered soon after the operation, and at night she was ordered opium and creasote, and to take ice freely. As the sickness still persists when she takes anything, Mr. Smith ordered the discontinuance of all nourishment by the mouth, and instead, an enema of beef-tea and brandy every two hours.—Ten P.M.: There has been a free oozing of blood during the day by the side of the pedicle; the belly has become tumid and very painful, especially on the right side; pulse 140. Continue creasote and opium pills.

29th.—Sickness has quite subsided, and she is able to take beef-tea; oozing of blood and pain have diminished; bowels open; countenance cheerful. She has taken six ounces of wine and some egg flip. Repeat opium pill.

30th.—Passed a comfortable night. Pulse 128; less pain in abdomen; tongue clean; countenance cheerful. Continue the same.

July 1st.—She was not so well last evening, felt lower, and inclined to vomit; she therefore had an injection of beef-tea, and took three grains of opium during the night. She is better this morning, but the pulse is 140 and the tongue dry. Dressings removed to-day; wound looking well, and healing. Still some oozing from the side of the clamp. As the bowels have not been open for forty-eight hours, she is to have an enema of gruel and castor oil.

2nd.—She has been suffering much pain since the injection, which caused free purging. There is more swelling of the belly, with pain, and a wiriness about the pulse; tongue slightly red. To have the citrate-of-ammonia mixture, with five minims each of tincture of opium and chloric ether, every four hours.

3rd.—She is better. There is much less pain and distension; pulse less wiry; wound discharging freely. She is taking wine and beef-tea. Clamp removed.

4th.—The patient has passed no urine during the last twenty-four hours, and there is a decidedly urinous smell about the discharge from the wound, which is thin and copious. On introducing a catheter, only an ounce of urine was drawn off; the instrument was therefore tied in the bladder, and the patient ordered to be turned on her side.

5th.—Still a great deal of urinous discharge from the wound. The abdomen, however, is much less swollen and painful. Patient takes nourishment well.

6th.—It is quite evident that there must be an opening in the bladder, as the catheter became blocked last evening, and then there was a profuse clear discharge of urine through the wound. Since the catheter has been cleaned and replaced, there has been an abundant flow through it of limpid urine, and much less through the wound.

After this diagnosis had been made, there was little or no hope of her recovery entertained, although for a day or two this woman rallied wonderfully. The abdomen became flat and painless, the wound put on a healthy granulating appearance, and the discharge was more healthy and more decidedly purulent; but the pulse continued very rapid, and she got a severe attack of aphtha, and about a week before death an abscess appeared on the back of each wrist. She, nevertheless, took nourishment well, and lingered on until the 17th, when she died.

*Post-mortem examination.*—The wound was partially healed for three fourths of its extent. On laying the cavity of the abdomen fairly open, the bladder was found to have a large ulcerated opening at its superior and posterior part, large enough to admit two fingers. The intestines immediately around the site of the tumour were matted together, and at other parts slightly adherent. The left ovary was found to be the seat of disease similar to that in the one removed, and was the size of the fist. The right ureter was dilated, but sound. Scarcely a trace of the pedicle of the removed tumour could be noticed. Deposits of pus were found between the two layers of peritoneum over the intestines. There were also deposits in the extensor tendons of either wrist. Both the pleuræ and pericardium were roughened with lymph.

In some remarks which Mr. Henry Smith made after the operation, he stated that it was undertaken solely as a matter of necessity, as it was quite clear that the patient must die sooner or later after spending a short interval in pain and misery. With regard to the operation itself, those present had been able to see what formidable difficulties he had to contend with. Nevertheless, it had been satisfactorily concluded. It was true that, having considered the matter fully, he had prepared himself for the possibility of great difficulties in the proceeding. It was the opinion of some of his colleagues that considerable adhesions would be found to exist, and there was reason to expect this as the patient had suffered such constant pain about the tumour, and there had been a continual irritating discharge, which would be liable to set up inflammation and subsequent adhesions. It was well known, however, that an extreme degree of adhesion, especially between the tumour and the abdominal wall, did not contraindicate the operation, nor render it more fatal. In this case there was much less adhesion to the abdominal wall than he expected; but unfortunately the tumour was adherent to much more important parts—viz., the omentum and intestines, and indeed it was necessary to use the utmost caution to prevent injury to the latter.

## GUY'S HOSPITAL.

### ŒDEMATOUS GLOSSITIS.

(Under the care of Dr. GULL.)

THE notes of the following case are those of Mr. J. Henry Evans, clinical clerk:—

Ephraim M——, aged twenty-six, a wheelwright, living in John-street, Spitalfields, was admitted Feb. 15th, 1862. He stated, in writing, that he was quite well the night before. Felt a small pimple on the left side of his tongue when he went to bed at ten o'clock. At twelve his sleep was disturbed by a pain under the chin, extending quite across. At four this morning his tongue had swollen so much that he could not speak, and it has been rapidly enlarging ever since. He had not been taking mercury or other medicine. On admission, he could only open his mouth by pressing the lower jaw downwards, the depressor muscles being unable to move it. He cannot protrude his tongue, which is much swollen, studded with numerous red points, and covered with a tenacious mucus. He cannot speak. When swallowing he has pain, and feels as if he was about to be choked. There is no difficulty of breathing, nasal respiration being quite free; breath very offensive. He now has pain deep in the temporal fossæ and under the chin. When the tongue is pressed, an aching pain is felt in it. The uvula and velum are also thickened. There are no enlarged glands about the neck, nor is there any swelling about the maxilla. Pulse 104, full, soft, and compressible. No heat of skin. Ordered an enema of soap, and to rince his mouth frequently with warm water.—Three P.M.: Bowels relieved. When he tries to swallow he has spasm in the neck, and his attempts at doing so are quite unsuccessful. Ordered blisters

to the nape of the neck, a linseed poultice under the chin, and beef-tea enemata. At half-past nine P.M. the house-surgeon ordered twelve leeches to the angles of the jaw.

Feb. 16th.—One P.M.: Managed to swallow a little, but with great difficulty. No dyspnœa; pain in the temples relieved; pulse 100, soft; urine scanty and high-coloured, sp. gr. 1031. Ordered a lotion for the mouth—one drachm of tincture of myrrh to an ounce of water. In addition to beef-tea, to have four ounces of brandy, two eggs, and milk. In the evening he writes, "The fuller my mouth is, the better I can swallow."

17th.—Looks very cheerful; can swallow pretty well, and speak in a whisper. Less pain under the chin; tongue much less swollen, and covered with a white fur; pulse 70, full and soft.—Nine P.M.: Can speak distinctly; tongue much diminished in size, and he can now protrude it a little.

18th.—Is now able to speak and swallow well; tongue much smaller and clear, but the surface feels raw; soreness now exists only under the chin.

19th.—The tongue is nearly of its natural size; he can open his mouth freely. Fauces a little red and swollen, otherwise nothing peculiar to be observed in them. Discharged.

## WESTMINSTER HOSPITAL.

### VARICOCELE OF TWELVE YEARS' DURATION; GREAT PAIN IN THE TESTICLE; OPERATION BY WIRE LIGATURE; CURE.

(Under the care of Mr. BARNARD HOLT.)

THE notes of the following case were kindly furnished by Mr. George Pearse:—

Henry G——, aged twenty-four, a butcher, was admitted April 15th, 1863, suffering from varicocele of twelve years' duration. He states that for many years he has been accustomed to ride for several hours a day, and frequently without a saddle; that he does not remember to have met with any accident, but that his business required him to stand for a considerable period of the day; that he always felt weak, but has not been laid up with any serious illness. Twelve years since he complained of pain in his left testicle, which was increased upon exertion, and occasionally was very severe at night. He consulted a surgeon, who advised him to wear a suspensory bandage; but, although he had continued to do so, the pain in the testicle had latterly so much increased as to compel him to abandon his work. Upon examination, the usual tortuous and congested condition of the veins was detected behind the testicle, which, however, could be emptied by placing him in the horizontal position; but when pressure was applied over the external abdominal ring, and the patient was desired to resume the perpendicular, the veins were more swollen than before. The vas deferens could be easily isolated.

Mr. Holt determined to tie the veins with the wire suture by the subcutaneous method; and the patient being placed under the influence of chloroform, and the vas deferens isolated, a needle, armed with the wire ligature, was passed through the scrotum behind the diseased veins, and made to perforate the scrotum on the inner side. The needle was now made to enter at the same opening, and the wire was passed in front of the veins, and so out at the first puncture; thus no skin was included in the wire loop, but merely the veins and some areolar tissue. The wire was now twisted, and the same proceeding was adopted a little lower down, by which the veins were thoroughly included in two ligatures. The wires were now shortened, the intention being to subject the veins to compression for three or four days, and then to remove them by simply untwisting them. For the next three days the patient was comfortable, and did not complain of pain. There was slight swelling, and tenderness when the part was touched, but no other pain. On the fourth day Mr. Holt intended untwisting the wires as before described; but the twisted portion was so deeply imbedded that he determined to cut both ends short and leave them as permanent compressors. The punctures healed in two days, and the wires remained, not exciting any irritation or disturbance, and the patient was able to work without inconvenience. He was detained in the hospital for a fortnight that Mr. Holt might see whether any inconvenience was experienced; but none having occurred at the expiration of that time, he was discharged, but requested to present himself from time to time that the result might be watched. The veins between the ligatures were entirely obliterated, and the patient described himself as perfectly free from any pain in the testicle. He has presented himself occasionally as requested. The wires can be felt, but they do not occasion any inconvenience, and he has resumed his work with a perfect immunity from pain.

Mr. Holt remarked that this was a case from which probably some instruction might be derived. He stated it was not his intention, in the first instance, to have left the wires around the veins; but as there was some little difficulty in their removal, he determined to retain them, as in all probability they would not excite irritation, and they would positively prevent any recurrence of the disease. He considered it was a practice that might be repeated with advantage. The pain of the operation was merely that which resulted from the two punctures in the skin, and the patient had not otherwise suffered, as was almost always the case when any portion of the integument was subjected to pressure. The operation was in itself of the easiest possible kind to perform, and he did not consider the patient need be confined to bed. Should future cases be attended with a like favourable issue, the proceeding would become general, and the pain and time of the patients be considerably abridged, while the question of recurrence would be entirely set at rest, such an occurrence being impossible so long as the wires acted as compressors.

## ST. BARTHOLOMEW'S HOSPITAL.

### SYMPTOMS OF POISONING FROM EXPOSURE TO THE VAPOUR OF EMERALD GREEN.

(Under the care of Mr. COOTE.)

THE following short notes have been for some time in our possession, and as the case bears somewhat upon that of copper poisoning recently under the care of Dr. Harley at University College Hospital, and published in our "Mirror" of the 1st inst., we now give place to them.

Walter W——, aged twenty, who has been employed four months in Mr. Tyler's works as colour-maker, applied at the out-patient room at the above hospital, where Mr. Coote saw him.

The patient had once before been attacked with symptoms similar to those he is at present suffering from. He says that he has to stand while at work in the vapour arising from the process of preparing the emerald green for paper. The preparation contains arsenic, sulphate of copper, and nitric acid.

He had been ill for about one week before admission. The face was swollen, the eyes nearly closed, the conjunctivæ congested, the nostrils sore, and the scalp tender; both hands were swollen and excoriated, with patches of slough on one of the fingers; the left foot was also affected. The disease first commenced in the nostrils and finger. He was ordered a bread poultice and rest.

Under treatment he became quite convalescent in the course of a month, and left the hospital.

## WEST LONDON HOSPITAL.

### SCIRRHOUS TUMOUR ABOVE THE BREAST, BUT NOT INVOLVING THE GLAND; SUCCESSFUL REMOVAL.

(Under the care of Mr. TEEVAN.)

M. B——, a thin healthy-looking woman, aged fifty-three, was admitted June 8th. She stated that about four years ago she noticed a small lump on the right side of her chest, midway between the clavicle and nipple, which gradually increased in size, but caused no inconvenience till six weeks ago, when it ulcerated, and was attended with excessive pain and occasional bleeding. At the time of her admission there was a tumour of about the size of a small orange situated a few inches below the right clavicle, but not in any way involving the mammary gland. It was nodulated and intensely hard, the skin covering it being of a dark purple hue and everywhere adherent. The base of the tumour was firmly fixed to the pectoral muscle, and its apex was abraded to the extent of a shilling, and exuded dark blood. There was no history of cancer in the woman or her family.

On June 11th Mr. Teevan excised the growth, leaving the mammary gland intact. The section presented a well-marked specimen of scirrhus, with incipient disintegration of the centre. The operation was followed by an attack of inflammation, which extended to the breast and ended in abscess. The

woman left the hospital on the 1st of August, with the wound healed.

In all probability the growth was a cancerous gland, which had worked its way round the free border of the pectoral muscle. A curious coincidence in this case was that the tumour appeared on the cessation of the menses four years ago, and that since the operation the menses have returned regularly.

# Provincial Hospital Reports.

## NORTH STAFFORDSHIRE INFIRMARY.

FRACTURE OF BOTH THE UPPER AND THE LOWER EXTREMITIES, AND SECONDARY AMPUTATION OF THE THIGH, IN A LAD AGED FOURTEEN; RECOVERY.

(Under the care of Mr. GARNER.)

THE notes of the following case were forwarded to us by Mr. Charles Orton, house-surgeon:—

Robert J——, aged fourteen, a collier. On January 22nd, 1863, he was knocked down by a coal truck, the chain of it catching him round the thighs and dragging him for many yards down an incline. On admission he was quite sensible, but weakened from shock and loss of blood. The injuries he sustained were: Comminuted fracture of the radius and ulna of the left arm, and also of the humerus of the right arm; simple fracture of the left femur; compound fracture of the right femur about its centre, and from the wound of which at the back part the bone protruded; the soft parts in front of the left ankle-joint were torn away to the extent of a crown-piece, the articulating surface of the astragalus being visible; the skin covering the os calcis of the right foot was also torn away. He was otherwise bruised and grazed. The arms were set with short splints (afterwards with starched bandages), which became quite firm at the end of five weeks. The left leg was placed on a M'Intyre's splint, and did well. Liston's long splint was placed on the outside of the right leg; but owing to the foot and heel becoming swollen and inflamed, and the wound getting larger, it could not be kept on after fourteen days. Short splints were then used. Extension could not thus be kept up, and the bones overlapped. An inch of the upper fragment was removed, and the thigh placed on a tin splint, with an aperture in it to allow of the wound being dressed. No union, however, seemed to take place. The discharge became thin and profuse, the wound of the heel larger, and the bone affected. For the first six weeks after the accident the lad bore up bravely, never having a bad symptom; but the drain from his thigh began to tell on his constitution, and it was deemed expedient to amputate, which was accordingly done, the patient being under the influence of chloroform, on the 21st of March, after the manner of Teale.

March 24th.—Marked improvement in the lad. On the inner side of the stump is a slough; but it looks only skin deep. Some sutures were removed.

27th.—Slough has come away; also three ligatures.

April 5th.—The femoral ligature was removed, as were also the remaining sutures. The wound healed, except at three points.

10th.—The wound quite healed, except a small point where it sloughed.

## NORFOLK AND NORWICH HOSPITAL.

STONE IN THE BLADDER.

(*Reported by* C. WILLIAMS, Esq., M.R.C.S.E.)

THE following is a list of cases of stone in the bladder operated on at the above hospital. The table is intended to show the mortality at different periods of life, and extends over a term of ninety years—from January, 1772, to December, 1862.

Of the total number, 869 were males, and 41 were females.

811 were operated on by the ordinary lateral method, and 105 died.

41 by the median operation, and 11 died.

41 were females, and the calculi extracted by dilatation; 2 died.

17 were lithotrized; none died.

| Age. | Operations. | Cured. | Died. | Mortality. | Operations. | Cured. | Died. | Mortality. | Operations. | Cured. | Died. | Mortality. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 to 10 | 328 | 306 | 22 | 1 in 14·909 | | | | | | | | |
| 10 „ 14 | 55 | 53 | 2 | 1 „ 27·5 | 455 | 421 | 34 | 1 in 13·38 | 574 | 532 | 42 | 1 in 13·6 |
| 14 „ 20 | 72 | 62 | 10 | 1 „ 7·2 | | | | | | | | |
| 20 „ 30 | 59 | 55 | 4 | 1 „ 14·75 | 119 | 111 | 8 | 1 „ 14·875 | | | | |
| 30 „ 40 | 60 | 56 | 4 | 1 „ 15 | | | | | | | | |
| 40 „ 50 | 58 | 47 | 11 | 1 „ 5·27 | 190 | 155 | 35 | 1 „ 5·42 | 336 | 260 | 76 | 1 „ 4·42 |
| 50 „ 60 | 132 | 108 | 24 | 1 „ 5·5 | | | | | | | | |
| 60 „ 70 | 119 | 87 | 32 | 1 „ 3·71875 | 146 | 105 | 41 | 1 „ 3·56 | | | | |
| 70 „ 80 | 27 | 18 | 9 | 1 „ 3 | | | | | | | | |
| Total ... | 910 | 792 | 118 | 1 in 7·71 | 910 | 792 | 118 | 1 in 7·71 | 910 | 792 | 118 | 1 in 7·71 |

# Reviews and Notices of Books.

*Practical Lithotomy and Lithotrity; or, an Inquiry into the best Modes of Removing Stone from the Bladder.* By HENRY THOMPSON, F.R.C.S., of University College Hospital. pp. 274. London: Churchill and Sons.

LITHOTOMY has long been the favourite study of our most accomplished operators, and, after Liston's brilliant and rapid manipulation, it might be thought that there was little room for improvement in the operative procedure. The introduction of lithotrity, and the revival, with improvements, of the median operation by Allarton and Buchanan, have, however, effected a change in the practice of the best-informed surgeons. Recently it might be said that, given a patient with stone, and the fact once certified by the test of the sound, only one thing was to be done—namely, to cut by the lateral method. The stone might be large or small, hard or soft; and it did not much matter to the surgeon, so far as the selection of operation was concerned, which it was. But now, with a choice of the lateral, median, and suprapubic cutting operations, and having regard to the ascertained advantages of lithotrity in particular cases, it is desirable to establish an accurate diagnosis of the composition, size, and shape of the stone, in order to select the operation most in accordance with those circumstances.

The task which Mr. Thompson has set himself in the present work, and which he has accomplished in a manner most honourable to his industry and sagacity, has been—first to furnish the elements for appreciating the value of each form of operation; next to decide on the best manner of performing it; and finally to give an exposition of the means of arriving at a correct diagnosis of the nature of the stone, in order to fix upon the suitable operation.

The materials upon which he bases his researches are gathered from very varied and authentic sources. He is indebted to many of the best known hospital surgeons of this country for reliable information relating to nearly 1500 cases; and furnishes in all a report of more than 2300 cases, of which 1800 are available for statistical purposes. (See pp. 223–30.) These materials he handles with the most rigid analytical severity.

One question of considerable interest is the influence of age upon the mortality after each kind of operation. From the tables which Mr. Thompson has compiled it is seen that the success of lateral lithotomy below the age of eleven is so great

as considerably to surpass the results given by lithotrity at that age, the deaths below six years being only 1 in 14; below eleven years, only 1 in 23½ cases. The mortality gradually increases from that age, being 1 in 9¼ cases below sixteen years of age; 1 in 8 patients up to thirty years; 1 in 10½ cases from thirty to thirty-eight years of age; 1 in 6 cases from the age of thirty-nine to forty-eight; and 1 in 4¾ from the age of forty-nine to fifty-eight. Thus it will be seen that while from fourteen years of age and upwards the question of crushing a small stone may be considered favourably in proper cases, after forty lithotrity is strongly indicated. Since, however, one-half of the entire number of stone cases recorded have been in persons under the age of thirteen, it will appear that in fully one-half of them crushing may be considered to have been contra-indicated. The two extremes of frequency of the occurrence of calculus in the bladder are at the extreme periods of life. Next to infancy, old age suffers, in the period between fifty and seventy. And if the number of old persons suffering from stone is absolutely far less than that of children, yet Mr. Thompson believes that it is relatively even greater; that is to say, the proportion of elderly calculous patients to the existing population at their own age is larger than the proportion of children afflicted is to the number of existing children. For these elder cases lithotrity is usually the more advantageous proceeding, as the above figures show. Hence the question of age becomes a most important element; for calculus most frequently comes before the surgeon at the two extremes of age, which generally indicate cutting for the first and crushing for the second. This subject Mr. Thompson has presented in a more perfect manner than any previous author.

He has investigated with equal care the practical questions arising out of the size and composition of the stone. The following extract is interesting in itself, and shows how successfully the author has applied to surgical practice the results of work in the study and the laboratory, as well as the experience of the operating theatre. As to the choice of lithotomy or lithotrity for healthy adults—that is, the patients lying between the extremes which we have indicated,—he says:

"If the calculus is of small or of medium size, and single, whether it be soft, friable, or compact, and supposing it proved by preliminary examination that instrumental manipulations can be easily performed and are well borne, it should be crushed.

"But the term 'medium,' here used in relation to size, although admitting of a little extension for calculi of uric acid and the urates, must be restricted quite within the limits assigned, for those of oxalate of lime: their spheroidal general outline makes a medium-sized calculus (one inch in diameter), quite large enough, if not rather too large, for lithotrity.

"If there is any special or exceptional ground for rejecting lithotrity in such cases, some form of central perineal operation is well adapted to them. The median if the stone is small or medium, the medio-bilateral if it is of full medium size; the latter offering more room at small risk when it appears to be required. Probably the result by Buchanan's operation would be equally good; its present achievement in *adults* is eight cases with one death. The median in *adults*, from Mr. Allarton's collected cases, has given one death in seven; the lateral, from 510 cases of *adults*, in my own table (but including stones of the largest size), one death in five and a quarter cases. If, on the other hand, the stone is large, and especially if it be also one of compact structure, the lateral operation would generally be the best to select. For a large and friable stone lithotrity may be successful, but such a one offering between twenty-five and forty years of age would probably be as well dealt with also by lateral lithotomy."—pp. 235-36.

We cannot further follow the author through all the details of his subject; but the reader will find in successive chapters a careful study of lithotomy, with a minute account of the operative procedures according to the lateral, bilateral, medio-lateral, median, and recto-vesical methods; with a review of the proceedings of Dr. Buchanan's and Mr. Allarton's methods. The cause of death following lithotomy, and the difficulties and dangers met with in lithotomy, are each made the subject of a separate chapter. In dealing with lithotrity, the author gives an able historical introduction; and then passes on to describe its objects and the principles on which instruments should be constructed in order to attain them, giving woodcuts of two excellent new lithotrites by Coxeter and Weiss, which are obvious improvements even on the beautiful instruments of Charrière. The systematic application of lithotrity, and the choice of proceedings best adapted to different cases, are successively considered; and the book concludes with practical illustrations by clinical observation.

Some part of this work appeared in our pages last year, being the Lettsomian lectures delivered before the Medical Society of London; but from the restrictions which the demands on our space necessarily impose, Mr. Thompson was unable to develop his subject so fully as in the ample bounds of his present octavo. This will undoubtedly long be the standard English authority on lithotomy and lithotrity.

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*The Angler-Naturalist: a Popular History of British Fresh-water Fish, with a plain Explanation of the Rudiments of Ichthyology.* By H. CHOLMONDELEY PENNELL. Illustrated by upwards of 150 Wood Engravings. pp. 425. London: Van Voorst.

IF other lands have bred "mighty hunters," England has always been the birth-place of gentle anglers. Britain is the paradise of fishermen. The schoolboy's first holiday is spent with a long pea-stick and crooked pin for the delectation of silly minnows; and the hard-worked Londoner anxiously looks forward as summer approaches to the treat of coquetting once more with the speckled trout, ever open to the temptation of a well-thrown fly. From sticklebacks to salmon *quels souvenirs touchants!* Yet, though we are so many of us fishers, it cannot be said that the study of ichthyology as a science, or as a branch of natural history, is popular amongst us. Old anglers, it is true, gradually accumulate a sort of natural-history experience of certain fishes and their habits. But such knowledge is usually of a very general and vague kind, and forms only a secondary acquisition to the technical rules of the art of angling. One reason for this may be that hitherto not any treatise has appeared specially adapted to the requirements of fishers who may desire to find in a compact form a good general outline of ichthyology. If so, such an excuse is now at an end. In the volume written by Mr. Pennell both the sportsman and the naturalist will find the rudiments of an interesting branch of natural science well expounded by the pen of the writer, and beautifully illustrated by the artist and engraver.

"To the angler, the value of even a moderate acquaintance with ichthyology cannot be exaggerated. Not only is it of the greatest practical value by the insight which it gives him into the habits, food, spawning-seasons, &c., of the several fish, but it also doubles the pleasure of success. The most insignificant captures have to the naturalist an interest of their own, apart from their mere weight in ounces."—p. 2.

Let those, then, who have hitherto been satisfied with being simply killers of fish turn to this very beautiful book, and make themselves masters of its pages. It will be strange indeed if they do not wish to become something more, and, we must even say, better.

The illustrations to Mr. Pennell's text are, through the liberality of Mr. Van Voorst, those which grace the late Mr. Yarrell's "History of British Fishes." Most of these engravings, we are told, were executed under Mr. Yarrell's immediate superintendence during a lengthened term of observation; and the best judges will agree in the opinion that it would be difficult, if not impossible, to supply more reliable and perfect representations of the finny tribe.

Particular attention has been paid by the author to the history of the pike and the various salmon and trout species, as being pre-eminently the game-fish of the country, and, in the case of the salmon, as representing in a national point of view an important article of food. The work contains, however, a

notice of every generally known species of fresh-water fish inhabiting the British islands.

We can conscientiously recommend this new volume of the charming Van Voorst series of works upon Natural History as fully bearing out the reputation of the preceding volumes.

## ON THE FEVERS OF THE WEST COAST OF AFRICA.

*To the Editor of* THE LANCET.

SIR,—The fate of the crews of the *Alburkah*, *Wilberforce*, and the *Soudan*, acquired for the delta of the Niger the ominous designation "Gates of the Cemetery" from Dr. Boyle, R.N., who described the coast thus: "This shore is forbidding to look at, dangerous to approach, deadly to the visitor, and disgusting when known."

Other expeditions were undertaken by the Government in support of the views of the late Mr. M'Gregor Laird, who accompanied the succeeding expedition and ascended the Niger above Rabba, the highest point to which a European vessel has ever arrived from the sea; and Mr. Oldfield, an English surgeon, resident at Sierra Leone, accompanied him. Mr. M'William and Mr. Hutchinson were also among the number of those who accompanied the succeeding expeditions, and their professional endeavours threw a more favourable light upon the subject of African fever. Since then, availing myself of the previous experience of these gentlemen, I left Liverpool in the steam-yacht *Sunbeam*, in June, 1860, and ascended the Niger as far as the confluence of the Tshadda, in medical charge of the Niger Enterprise of 1861 and 1862. My object, therefore, is to add my experience, in the hope that it will be useful to others; more particularly as present events favour the probability that the river Niger will soon hold a most important commercial relation to this country, and which has been in a great measure retarded by the awful mortality which formerly occurred in that river. Without entering into any protracted examination of the causes, or speculating upon the origin of the causes of African fever, I will simply describe the disease as I saw it amongst the crews of three vessels under my charge, numbering from first to last about 300 men.

In general terms it may be said that the fevers of Africa are the same as those which prevail in other tropical climates, with the exception of yellow fever, which has not been observed in the Niger, though sporadic cases occur upon the coast—in Sierra Leone for example. The fevers of the Niger are of the same type as those of which I have had personal experience on the Mississippi; the latter river being more unhealthy than the Niger, for the mortality from yellow fever is greater than that occurring from the intermittent types of the Niger.

There are, however, points of difference between the intermittents of the two rivers, yet the same remedies succeed in the one as the other. The great mortality which has hitherto occurred on the Niger may be attributed, I think, in a great measure to the supposition that African fever is essentially distinct from ordinary intermittent fevers, differing from them as much as yellow fever does.

I left Liverpool in the steam-yacht *Sunbeam*, in June, 1860, and, after sighting Madeira, I administered daily to all on board two or three grains of quinine. We sailed along the coast from Cape Mesurado, touching at various native villages, and were in communication with the shore at several places on the Grain Coast, Liberia, and the Gold Coast. We arrived off the Niger in the rainy season, and, crossing the bar of that river, anchored four miles within its mouth, amid the mud swamps and mangroves, which extended for many miles to the north, south, and east of where we lay; our crews, both white and black, being daily engaged hewing down the mangrove trees upon the banks as fuel, which was cut up and carried on board and exposed upon our decks. Here we remained for several months (our men living on the usual food provided for ships in any climate) and during the dry season which is preceded by the parching Harmattan winds blowing across the continent from the east, followed by the fierce advent of the summer season, when the surrounding swamps and all that festers around and beneath the vast wilderness of shrub, plant, and tree, give forth the fumes of malaria, hanging like a pall over the rottenness it shrouds.

Notwithstanding the anxiety I felt for the health of our crews, it was not until the dry season had considerably advanced that fever developed itself. The first death occurred among our black men, which men we had brought from the Kru Coast. Out of eight deaths among the black men, one died of dysentery, one of pneumonia, and two from exposure. On making a post-mortem examination, a few hours after death, of the youth who died of pneumonia, I found the heart pale and flabby. The remaining four, there was good reason to believe, died from poison at the hands of the natives as a punishment for robbing some of their huts, of which those men had been guilty; this manner of disposing of criminals is usual among the natives. They died within a few hours after coming from the shore, where they had been at work; stupor, general prostration, and great coldness of the extremities being the only precursors of approaching death.

Of the white men, who were continually in communication with the shore, two died; one of intemperate habits, and the other was a phthisical patient and a hard drinker. The rest of the cases among the white men were the true African intermittent and remittent types of fever, the most urgent symptom of which was extreme prostration of strength. The treatment was as follows:—Twenty grains of quinine and the same of powdered ginger were administered in hot wine and a little sugar immediately. This generally stopped the severe shivering fit, and five grains of quinine were administered every three or four hours in the same manner. Nearly the whole of the ship's crew had symptoms of fever during the two years we were in the river and on the coast, and the majority were at their customary duties on the third day after the attack. Other treatment was of a subsidiary character, consisting of warm and tepid bathings in the hot stage, according to circumstances, with light and nutritious diet. Wine and brandy were indispensable aids on account of the extreme prostration, and in one case brandy was administered to the extent of a bottle in the forty-eight hours. In no case was calomel exhibited more than once, and that at the commencement, in combination with rhubarb, with the sole view of clearing the primæ viæ. Not a single death from African fever occurred. I myself had three distinct attacks, the last being the remittent type. Our sojourn in the delta and for six hundred miles up the river and continually visiting the towns occupied nearly two years. The fevers of Africa being essentially asthenic, the administration of calomel and bloodletting should be avoided.

We returned to England without losing a single white man from climatical influences. I must observe, however, that the continued administration of quinine was attended with some mischief, several cases of quinism having occurred. Incidentally I may be permitted to mention that in our Island of Sheppey there is a common prejudice against quinine, a vulgar belief existing that quinine rots the bones; and it is curious to remark that the late Mr. M'Gregor Laird, who took very much of quinine for a long period, died from caries, which commenced in the bones of the ear.

I am, Sir, your obedient servant,

St. Just, Cornwall, 1863. WILLIAM DURRANT, L.F.P.S.G.

## UNIVERSITY OF LONDON.

*To the Editor of* THE LANCET.

SIR,—I am directed by the Senate to request you to announce to candidates for the ensuing second M.B. examination, that the examination for Honours in Surgery will *this year* be carried on as heretofore; the Pass examination alone being modified by the omission of the Practical examination in Surgery.—I am, Sir, your obedient servant,

Burlington House, Aug. 1863. WM. B. CARPENTER, M.D.

HYDROPHOBIA ELEVEN MONTHS AFTER THE BITE OF A RABID DOG.—M. Dupuy, of Lyons, lately mentioned before the Society of Medical Science of that city, the case of a young lady, sixteen years of age, who was bitten by a dog which had given signs of hydrophobia. The patient had with her a favourite dog, which was attacked by the rabid animal, and whilst trying to save her own dog, the girl was severely bitten in the hand. The wounds, which bled rather freely, were not regularly dressed, and soon cicatrized. Some suspicions were afterwards entertained, and the girl had, probably from fear, hysterical attacks, which M. Dupuy states were not rabid fits. A journey was then undertaken, and all fears soon vanished, until eleven months had elapsed since the accident. At that period, the young lady was seized with unmistakable signs of hydrophobia, and died in a few days.

# THE LANCET.

LONDON: SATURDAY, AUGUST 15, 1863.


THE Queen's College, Birmingham, at present occupies a position which must be a source of disappointment to every lover of science. The regrets occasioned by the statements on the trial of COX *v.* FEENEY, heard at Warwick on the 6th instant, are in no way diminished by a careful inquiry into the circumstances which eventuated in that action. Inasmuch as the Lord Chief Justice and a special jury have sanctioned the publication of those details which the plaintiff regarded as libelous, we invite attention to the teaching they afford; being satisfied that practical good must result from their perusal, not only by those placed in authority over, but also by those holding responsible positions in, our public institutions.

The medical profession and the cause of science generally are much indebted to Mr. W. SANDS COX. His labours to advance the one and uphold the other have been unceasing and successful. With him originated, either in 1824 or 1825, the Birmingham School of Medicine. Owing principally to the active co-operation which Mr. SANDS COX received from men whose influence his exertions secured, the establishment extended to the dimensions of a College, which in 1828 was in full operation. Of such consequence did this institution become, that in 1843 a Royal Charter was conceded to it. This Charter enlarged its operations, and granted to its students important privileges. The "Queen's College" of Birmingham proclaimed to the world what great results the earnestness of a medical practitioner had been able to accomplish. Similar examples of the liberality and philanthropy of members of our profession are not wanting. Many of the most useful educational and charitable institutions of the United Kingdom, now corporations of national importance, owe their existence to physicians or surgeons, who have not only originated but in numerous instances largely endowed them. Whatever may be our impressions from the admissions of Mr. SANDS COX respecting the present condition of the College in question, we desire not to diminish his claims to the lasting consideration of Birmingham, for having afforded to its inhabitants an educational establishment, at one time, for opportunity of instruction, second to none in Europe. Why, as has been alleged, it has fallen from its high position is an inquiry in the answer to which all are interested. It appears that the College has at different times received large donations. The late Dr. WARNEFORD contributed to it several thousand pounds. The interest of capital and the fees of students constituted its chief income. The staff of the College consisted of a warden, a vice-warden, a dean of the faculty, and several professors; the whole being subject to the control of a Council, constituted of certain noblemen and gentlemen of the neighbouring counties, of Mr. SANDS COX, and of other gentlemen more or less connected with the rise and progress of the institution. Mr. SANDS COX also held the position of Professor of Surgery, and was at various times elected to other posts in the College. In the year 1859 Dr. BLUNT, of Birmingham, filled the office of Dean of the Faculty. He had serious differences with Mr. SANDS COX, and during his tenure of office wrote a letter to the Bishop of WINCHESTER, the Visitor of the College, enclosing a list of particulars in which, as he alleged, "the charters, bye-laws, and trust-deeds of the College were habitually and wilfully violated;" and stated that he had "tried every means in his power to induce the Council of the College to rectify the illegalities in question, but without effect;" adding the words (the publication of which in the *Birmingham Daily Post* formed the basis of the legal action above alluded to), "I complain of the arbitrary, tyrannical, and overbearing conduct of Professor SANDS COX towards all who presume to differ from him in opinion, as well as of his complete inefficiency in every office which he now holds in the College and Hospital; and I pray your Lordship to avert the impending destruction of those institutions by at once removing him therefrom." To institute the inquiry thus invited would have involved the Visitor in expense and liability, against which Dr. BLUNT declined to give any indemnity. The Bishop referred the matter to the Charity Commissioners, who, in pursuance of their statutable powers, sent down an inspector (Mr. MARTIN) to investigate the condition of the College. The complaints and letter of Dr. BLUNT formed the subject of part of Mr. MARTIN'S inquiries, and were embodied in a report made in 1860 by their inspector to the Commissioners. The report was not acted on, and would, though the inquiry was public, have been unknown except to the authorities of the College, were it not that in June of the present year the *Birmingham Daily Post* (of which the defendant in action was publisher) reproduced it verbatim in its columns. It was alleged by the plaintiff that a peculiar spite against him had influenced its publication. It appeared that in the same newspaper had been printed, in the years 1857 and 1858, certain letters and articles having reference to the plaintiff, more particularly with regard to his treatment of a man who died in the hospital from stone in the bladder; the result of which was a former action by the present plaintiff against the present defendant, and its settlement on the insertion of an apology. Mr. COLERIDGE, who conducted the defence with hereditary ability, elicited from Mr. SANDS COX, on his cross-examination, that, while the departments associated with the College free from his control were in a flourishing condition and out of debt, those which he governed were in a state of decay; that in five of its departments there were but twelve students, though less than twenty-five involved a positive loss; and that before Mr. MARTIN'S inquiry all the professors had signed a memorial, in which, while they recognised Mr. SANDS COX'S great services in establishing the College, and his munificence in supporting it, they nevertheless asked him to resign his appointment in it on the ground that they found themselves unable to work in unison with him. This he refused to do. The differences continued. The students fell off. The professors resigned. The building began to decay from deficient outlay of funds to maintain it. A rival School of Medicine and Surgery, wholly unendowed, was started in opposition, and, as the report set forth, "was steadily advancing in public favour." With these facts before them, and the Lord Chief Justice's comment upon them, the jury found, without much hesitation, a verdict for the defendant.

The importance of this verdict cannot be too highly estimated. While deeply lamenting the occasion of it, more in sorrow than in anger we allude to the position of Mr. SANDS COX, who, having laboured for nearly half a century in the

cause of his profession, and having attained its deserved distinction, is yet through a special jury of his countrymen justly rebuked by their adoption of the concluding paragraph of Mr. MARTIN'S report, which states: "The witnesses examined on the inquiry, comprising many gentlemen of high station, character, and intelligence, are almost unanimous in attributing the present state of affairs to Mr. SANDS COX, whom they consider almost solely responsible for the management of the College. They most of them admit, and it is otherwise abundantly proved, that it is to Mr. SANDS COX that the College owes its existence; but it is alleged that, through want of method, regularity, and prudence, and some of them add of temper, he has brought that which he undoubtedly has created, and in which he takes a most lively interest, to the very brink of dissolution."

For us this trial has a special interest. There is no more perplexing position for a public journalist to occupy than when a necessity arises to do justice to the cause to which it is devoted, and yet to temper comments with discretion, which, without diminishing their force, may still preserve them from the appearance of malice. It is at all times a disagreeable and frequently a difficult duty to criticize the conduct or practice of veteran members of the profession. Few men after forty years of work—and this time has elapsed since Mr. SANDS COX founded this College—like or can withstand the active competition of their younger brethren. It is unfair to both when such is permitted. There is a period when retirement is a duty, and it is not just that the initiative of its suggestion should rest with those colleagues in office to whom other than disinterested motives may be attributed. We know of more than one instance in which personal reputation has been and is placed in jeopardy, and the interests of public institutions have been and are materially compromised, through the continuance in office for the exercise of active duties of professional men who have reached the age of fourscore. In the surgical profession there is a time when nature, not knowledge, fails; when advice, not action, should satisfy. In other professions it may be different. Judges on the Bench have expounded the accumulated wisdom of years with unfailing memory and unerring inference. Had they to write the same, or perform manipulations requiring energy and nerve, would their manuscripts or labours bear comparison with the efforts of their earlier years? We doubt it. Could octogenarian surgeons by speaking operate, what different results should we be enabled to record! So truly has the impropriety of this adherence to office been felt, so justly acknowledged are the ill-effects which have followed its practice, that the board of one of our most celebrated hospitals has passed a resolution that its officers should resign at the age of sixty-five; the first of whom to come under its operation was one of the ablest and most competent, and, we may add, exceptional practitioners in the kingdom. Though in his particular case the institution sustained a grievous loss difficult to as adequately fill, it is far better that one should suffer, and one instance of this kind occur, than that a system of life-perpetuity in our public institutions should be permitted, and past services be set off against present deficiencies. It is true that since the memorial and before this action Mr. SANDS COX resigned the more active position of operating surgeon to the hospital of the College. It is to be regretted that with that resignation he did not also abstain from other interference with the College. We affirm that a life-tenure of an office requiring energy and exertion is always to be deplored as much for the individual as the institution to which he belongs. This principle has received corroboration from the trial we comment on, and so far the profession must be benefited. In the verdict the public press has also been vindicated, and for this the medical profession should feel thankful. Every abuse exposed is a benefit conferred. It so happens that in this particular case the plaintiff and the complainant (Dr. BLUNT) were both members of the same profession. Let the occurrence not be, therefore, regarded as a professional quarrel, since as a governing member of the College, as well as surgeon to its hospital, Mr. SANDS COX was impeached, and for the observations in his double position he has been refused redress.

It is our painful privilege to be rendered conversant with most of the differences of this nature which occur. Our views are sought, our opinion is asked, and, we are glad to add, frequently our advice is followed, in many disputations which take place in medical institutions throughout the empire. We hold it to be a maxim in all such matters that a professional man is not a competent judge of his own position, and we invariably advocate and commend the selection of some members of the profession for the settlement of professional or *quasi* professional disputes. Had Mr. SANDS COX so acted, how different would his feelings now be! It is, however, never too late to mend; and one reparation Mr. SANDS COX has yet in his power, and he ought to rejoice that it yet remains, and that is—RESIGNATION! of all active duties in relation to the College; resignation, which we strongly impress on all who possess knowledge, but have outlived capacity; resignation, which to the honourable and veteran lover of his profession is but the justly-earned reward of services rendered and reputation achieved.

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IN these columns the first note of alarm was sounded as to the epidemics of fever and small-pox which have attacked the metropolis. In order to complete the history of the latter epidemic since we last registered its progress, it is desirable that we should review the figures, and bring them down to the present month.

During the thirty-one weeks ending the first day of the present month no less than 1448 deaths have occurred from small-pox in the metropolis. Since 1843 the mortality has but twice been in excess of this amount for the whole year—in 1844 and 1848. The ratio of deaths to cases admitted with small-pox into the Small-pox and Vaccination Hospital from 1836 to 1851 inclusive, as recorded by Mr. MARSON, was nearly 20 per cent. Assuming that the proportion of deaths to cases in the present epidemic has been 1 to 5, it would follow that upwards of 7000 persons have suffered from this most loathsome but most controllable malady in London within the past seven months. In the first quarter of the present year the deaths from small-pox numbered 422, of which 296 were young persons under twenty years of age and children; in the second quarter the deaths were 788, of which 574 were under the age of twenty. In the corresponding quarters of 1862 the total deaths from small-pox were 37 and 39 respectively. The total mortality from the disease in 1862 was 344.

The epidemic commenced towards the close of the summer of 1862. The following figures show the progress of the mortality from month to month since the beginning of 1862:—

| | 1862. | 1863. |
|---|---|---|
| January | 11 | 136 |
| February | 7 | 118 |
| March | 19 | 171 |
| April | 11 | 306 |
| May | 16 | 269 |
| June | 12 | 212 |
| July | 12 | 236 |
| August | 34 | |
| September | 31 | |
| October | 40 | |
| November | 59 | |
| December | 94 | |

The greatest mortality of any one week was in the seven days ending May 9th, when the deaths amounted to 71. From this period the progress of the weekly mortality was as follows:—

| Week. | Deaths. |
|---|---|
| 19th | 71 |
| 20th | 61 |
| 21st | 68 |
| 22nd | 68 |
| 23rd | 56 |
| 24th | 43 |
| 25th | 64 |
| 26th | 49 |
| 27th | 43 |
| 28th | 55 |
| 29th | 51 |
| 30th | 34 |
| 31st | 43 |
| 32nd | 49 |

Thirteen of the forty-nine deaths in the thirty-second week—the week ending on Saturday, the 8th inst.—are stated to have occurred to persons in whom vaccination had been performed. An inordinate number of grave cases of small-pox amongst the vaccinated is one of the most noteworthy facts in connexion with the present epidemic. It is a fact which in no degree tends to weaken our confidence in the protective power of vaccination when rightly performed. It indicates solely the large and increasing amount of bad and imperfect vaccination amongst the seemingly protected. This fact alone should have determined the Government to amend the Vaccination laws before the close of the last session of Parliament.

The hope of a rapid cessation of the epidemic, founded upon the sudden diminution of the mortality in the week ending the 25th of July (the thirtieth week), is unfortunately destroyed in a great measure by the augmentation of deaths in the two succeeding weeks. The Small-pox Hospital, it may be noted, continues full of patients; but there is not now the necessity for refusing admission to so many applicants as there was two months ago.

The distribution of the mortality in the different registration districts of London during the seven months, January to July inclusive, was as follows:—

| | Deaths. | Population, 1861. |
|---|---|---|
| West | 217 | 463,388 |
| North | 390 | 618,210 |
| Central | 182 | 378,058 |
| East | 407 | 571,158 |
| South | 258 | 773,175 |

The Small-pox Hospital, it is necessary to remember, is situated in the North district.

The recent quarterly return of the Registrar-General shows how general the outbreak of small-pox has been throughout England. In the quarter last terminated the disease prevailed to a greater or less extent in all the registration districts except one—Monmouth and Wales. In the South-Eastern Counties, small-pox was rife at Godstone and Croydon in Surrey. In Kent, eight deaths occurred from the disease at Rochester, and it was prevalent at Maidstone. In Berkshire, small-pox was prevalent at Reading; and at the beginning of the quarter the malady had been prevalent at Kintbury (Hungerford). In the South Midland Counties, the disease was noted at Wing (Bedfordshire). In the Eastern Counties, the affection prevailed in the following districts of Essex:—West Ham (ten deaths), Orsett, Rochford, Manningtree, Colchester, Hedingham (Halstead), and Radwinter (Saffron Walden). As a rule, the cases in Essex, although numerous, were little fatal. Twenty-two cases of the disease happened at Hartest (Sudbury) in Suffolk. "A man sixty-six years of age died of it, who had not been vaccinated; the others had been vaccinated, and had the disease in a very mild form. The complaint was brought by a boy from London." In the South-Western Counties, four deaths from small-pox were recorded in Plymouth: all the deaths occurred in one street, and three in one house. The disease was more or less prevalent in several localities in Cornwall. In the West Midland Counties, five cases, none of which proved fatal, were noted at Crick (Rugby), Warwickshire. In the North Midland Counties, the disease prevailed to a "great extent," but not in a severe form, at Grantham; and cases occurred at Market-Raisen and Misterton, in Lincolnshire; many cases also were recorded at Derby. In the North-Western Counties, small-pox broke out and made rapid progress at Hazelgrove (Stockport). The local registrar notes that there was "disinclination on the part of parents to bring forward their children for vaccination." In Lancashire, six deaths occurred from the disease at West Derby, and seven at Wigan. The malady was prevalent at Didsbury, unusually prevalent at Chorlton-upon-Medlock, and virulent at Manchester. The disease was also prevalent at Ashton-under-Lyne. "The guardians issued notices threatening proceedings against parents neglecting to have their children vaccinated, which has had a good effect, for more than 600 have been successfully vaccinated in the district during the quarter." Fifteen deaths occurred from small-pox at Oldham-below-Town. The registrar for Preston remarks: "In my report for the quarter ending December, 1861, I stated that no death had occurred from small-pox in this sub-district; since then I have registered 3427 deaths, of which 1687 were children of five years old and under, but not a single death has resulted from that disease, notwithstanding there have been a few cases of it, two of which brought the infection from Liverpool. This favourable result may be principally attributed to the great care manifested by the medical profession in carrying out the Vaccination Act." In Yorkshire and the Northern Counties, the malady was very widely prevalent. Its existence to a greater or less extent was notified in the following localities:—Skipton, Ripon, Harrogate, Wetherby, Yeadon and Guiseley (very prevalent but not very fatal), Elland (Halifax), Shipley, Bramley, Leeds, Dewsbury (eighteen or twenty deaths), Batley, Barnsley, Nether Hallam and Eccleshall-Bierlow, Sheffield, Goole, and Bramham, in the West Riding; York and Hull in the East Riding; and Egton, Whitby, and Northallerton in the North Riding. In the Northern Counties the outbreak was confined to Durham. Seventeen deaths from small-pox occurred at Yarm, and twenty-one deaths at Stockton (both places in the

Stockton sub-district). The disease had been prevalent at Bishop Auckland, and was very prevalent at Chester-le-Street.

Such is a brief outline of the progress of the epidemic of small-pox to the present time. Before Parliament meets again the materials for a complete history of the epidemic may be forthcoming. If further evidence be required to induce the Government to amend the Vaccination laws, these will unquestionably supply it. It is much to be regretted that the subject should have been set aside immediately prior to the termination of the last session; the postponement was not only needless, but most vexatious. Let us hope, however, that the magnitude of the present epidemic of small-pox will rouse the Government to a just sense of the importance of the issues involved in securing a more effective system of vaccination.

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THAT everyone, however conscientious he may usually be, is liable to be convicted at some time or other of caprice, indifference, or inability, cannot be denied. Even when personal position or pecuniary prosperity depends upon a proper performance of duty, human weakness will occasionally interfere to the disadvantage of those immediately concerned. But when the work to be done is wretchedly remunerated, and acknowledged with but little thanks, it is scarcely to be wondered at that the labourer is occasionally neglectful of his task. It may happen, from the peculiarity of the duty to be performed, that a casual neglect may not be followed by any serious consequences, or on the other hand, that the least dereliction of any of its obligations may result in consequences of serious import. Medicine is particularly open to the latter contingency. Human ailment primarily of slight intensity may be followed, if not at once relieved, by consequences that may be ultimately fatal. Even when the merely physical evil is but of comparatively small moment, the mental excitement or anxiety which may ensue when professional assistance cannot be immediately obtained, is often very considerable. In the wealthier classes of society the suffering which results from a temporary sickness is not nearly so great as that which may follow when the artizan or poor man is disabled. The latter, prevented from work, sees, perhaps, starvation threaten his whole family unless he seek refuge in the workhouse. Should he do this for a short time only, he breaks up a poor but permanent home. The child of an ignorant or impoverished mother is seized by illness. The parent seeks assistance from the parish, but her account is so erroneous and misleading, that either the relieving officer or the medical attendant gives a preference of attention to what is considered a more urgent case than her own; and it is found when the child is visited that it exists no longer. From the very nature of circumstances it is clear that occasional untoward results must ensue both to patient and practitioner amongst the poorer classes. Under the present system of administering Poor-law medical relief there cannot but be difficulties oftentimes to be encountered by the sick artizan in obtaining such professional assistance for himself and family as he is necessitated to apply for in times of scarcity. It is utterly impossible for some three or four medical men in a town with a population of 50,000 persons, to give that amount and kind of attention to individual cases the latter may require, however much they may desire so to do. A Poor-law medical officer cannot be ubiquitous any more than another person. There is a limit to his powers of endurance and work as there is to those of his fellow-townsmen. He has his private as well as his public duties to fulfil, and since the *quid pro quo* of the latter when weighed in the balance are found wanting, he cannot neglect the former unless, like his pauper patient, he himself would starve. If, indeed, a balance be struck between what the Poor-law medical officer actually does and what he receives for doing it, the advantage in favour of the former is exorbitantly large. But in spite of the utmost desire, and of unwearied exertions, unfortunate results, or imperfect performance of duties must, as we have said, occasionally ensue. A relieving officer will refuse an order, or give one only when it is too late, or the medical attendant will be summoned by a messenger who has neglected to furnish himself with the legal requisition.

Amongst the various systems recommended to supplant the present method adopted by the Poor-law Board that advocated by Dr. HEARNE, of Southampton, is worthy of notice. He has recently drawn attention in the *Southampton Times* to the particular opportuneness of the present moment for setting forth the necessity of an alteration in the prevailing system. As a remedy for some of its more patent evils he first of all urgently demands that the medical attendants on the poor should be paid a fair remuneration *per case*. He remarks—

"We are not without data as to the amount which union medical officers are fairly entitled to per case. The sum which has been recommended by the Poor-law Commissioners as a fair equivalent for medical services is from 6*s.* to 6*s.* 6*d.* per case.

"In the unions of Bradford and Todmorden 6*s.* 6*d.* per case was paid, independent of extras.

"Dr. Farr, no mean authority, estimates 2*s.* 6*d.* per patient as the lowest possible sum that can remunerate a medical man, without providing medicines.

"Our hospitals and dispensaries afford further evidence, and of an indisputable and disinterested character; the average cost for medicine of nine county hospitals being 3*s.* 7*d.* per case.

"According to the Rev. C. Oxendon's 'Statistical Report of Provincial Hospitals,' the average cost of each patient in drugs and medical appliances was 3*s.* 11¾*d.* At the Bristol and Canterbury Infirmaries, on an average of ten years, 4*s.* 3¼*d.*; at St. George's Hospital, London, 5*s.* 2¼*d.*"

The next suggestion is, that the pauper, on receiving his medical order, shall be allowed to take it to any medical man who has signified his readiness to attend the poor at the remuneration agreed upon. There would not be any practical difficulty, according to Dr. HEARNE, in carrying out this method, since each surgeon would send in, as at present, a weekly return to the board of guardians. The only difference would be, the smaller number of cases reported on from (say) seven or eight officers instead of a larger number from three or four. The adoption of this principle would, its proposer believes, have more advantages than one. It would be treating poverty as a misfortune rather than as a crime, and placing the respectable poor as much as possible in their proper position. The adoption of the principle has been already tested in reference to small-pox, and found to work well. Why then, asks its promoter, refuse the like privilege to the poor in connexion with their daily, nay hourly, illness and its distressing accompaniments?

"Some well-meaning people will suppose this per-case system is a mere visionary, unconsidered scheme. Nothing of the kind. It is perfectly practicable, would prove more effective, far more just, and, indirectly, more economical than the present defective and objectionable system."

Dr. HEARNE supports his statements by the record of facts

which have recently fallen under his notice, proving how ill-met the exigencies of particular cases are by the present system. The plan proposed in lieu of the latter certainly merits further consideration.

# Medical Annotations.

"Ne quid nimis."

## PROGNOSIS NOT PROPHECY.

THE dissociation of medicine and miracles has its disadvantages. Physicians often find the inconvenience of not being also prophets. Ordinarily they forecast the issue of disease with sufficient accuracy. In nine cases out of ten, or rather, ninety-nine out of a hundred, their natural and well-educated qualities, their sense and shrewdness, wonderfully developed by practice, serve them well enough. But now and again arises the exceptional case which takes an unforeseen turn, or comes to an unexpected or unexpectedly sudden termination. For the moment scientific prognosis is disparaged, and there are people of a superstitious turn, who, for nine days or so after such a case, will give more heed to a croaking raven or an itinerant fortune-teller, than to an accomplished surgeon who has been shown not to be a prophet. The disappointment of the public on finding that their gifted advisers are without "the gift of prophecy" is, of course, the greater in proportion to the importance of the life of the patient or the interests affected by his death.

A distinguished judge, of mature years, but of rarely good health, falls from his horse and breaks his knee-pan. Weeks elapse and nothing can be more satisfactory than the progress of the injured part and the general health of the patient. But all of a sudden the distinguished patient faints. It is the last feather that breaks the camel's back; and this healthy judge, who had borne himself so vigorously through a long and responsible life, and rallied so well from the shock of a violent accident, dies just after telling the story of his healthiness, and as he is being gently carried from his couch to his bed. The diagnosis of heart disease is wonderfully perfect, but not so perfect as to warrant any specific prognosis as to the time and rate of death. Fortunately not. It seems scarcely desirable that prognosis should become so perfect as to enable us to forecast the time of sudden death. The sure if not the only result of such perfection would be to hasten the catastrophe, and render intervening existence miserable and useless. Besides it is impossible. The occurrence of sudden death depends often upon vital conditions beyond the detection of the most skilful physicians, which again depend upon a concurrence of circumstances and influences equally beyond his control. Physical diagnosis is, as we have said, wonderfully perfect; but physical signs for the most part import physical facts, not vital states. Many a patient goes through a valuable life, and—if this is any satisfaction—ends it with the ordinary length of illness, who, by false and exaggerated ideas of the importance of mere physical signs or stethoscopic sounds, might be made wretched permanently, and killed prematurely. It is our professional pleasure, of course, to watch every step taken towards making Medicine a more exact science; meantime, at any rate, we have a human pleasure in its finer imperfections.

Our preliminary remarks have a more remote bearing on a medico-legal case which has lately excited considerable criticism in Scotland. Its interest to us turns chiefly upon the point, that the evidence of a most eminent surgeon seems to have been at fault. We say "seems," for according to the reports of the trial which have reached us, Mr. Syme has not been guilty of any remarkable want of foresight. The drift of his opinion of a railway accident of some months' standing—the opinion, be it remembered, being delivered three weeks after the single visit paid to the patient—was as follows:—

"The pursuer (plaintiff) has suffered *long and severely*. On the right thigh there were two sores, and there was another on the leg as large as the hand. The leg had the appearance as if sores on other parts of it had healed up. As to the sores yet unhealed, he was of opinion that they *probably* would heal, *but not speedily*. There was no permanent constitutional injury that he could discover. It appeared to him the pursuer was in the way of recovery, slow, but progressive. If the sores did not heal, amputation might be resorted to, and the circumstances were favourable if that should prove to be necessary. He meant by that, the time of life of the patient, and the part where amputation would take place, were favourable. There was always risk attending amputation, but he thought it might be done in this case without more than the ordinary risk."

Surely there is nothing in all this shockingly inconsistent with the patient's death *three weeks after*. The severe and prolonged suffering of the poor fellow is admitted; that the sores would heal is only regarded as a probability, not a certainty; and the possibility of a necessity for amputation, attended with risk, is expressed. It deserves to be specially noticed, that Professor Miller, who gave evidence on the part of the pursuer, and who had this advantage over Mr. Syme, that he saw the patient twice, once long before Mr. Syme's visit, and again considerably after it—indeed only a few days before the trial,—had the opinion that the pursuer would probably recover. Professor Miller said, "If the man survived, which was still only probable, the limb would be pendulous," &c. And yet, forsooth, because this patient died three weeks after Mr. Syme's visit, and Mr. Syme did not foretell his death, his prescience is pronounced to be at fault, local newspapers charge him with not adequately estimating the patient's sufferings—certainly a new fault in Professor Syme, who always enjoined upon his pupils the cultivation of a refined respect for human sufferers in every condition of life,—and repeat monotonous cant about the fallibility of *medical* experts, as if we lived in a world that was full of all sorts of other experts that were not fallible, and as if medical men had not to deal with questions in which, of all others, fallibility was most inevitable.

Of course Mr. Syme would have shown himself wiser than even he is if he could have said, "I saw this patient three weeks ago, and considered his life would last about twenty-two days, and that now he will be dying." This would have been prophecy, not prognosis; and life is not a thing that can be measured in this way. All that can be said against him and the other medical men in this case—for they all seemed to have thought the patient's recovery rather probable than otherwise—is that their judgment was not prophetic. To some natures there is no pleasure so exquisite as that of witnessing the fallibility of a great mind. Little minds especially enjoy it; for it suggests a connexion, a point in common, between them and it. But as long as doctors continue to be human and make no pretensions to prophecy, discerning people will accord them their esteem for what they are, and not for what they are not.

## THE HEALTH OF THE PAST QUARTER.

THE Registrar-General's Quarterly Report projects a dark shadow across the sunny remembrances of the past spring. Rarely has our variable climate assumed so bright an aspect as that which has characterized the second quarter of the present year. The temperature ranged largely above the average; food was comparatively cheap and abundant; and but for the distress in the cotton-manufacturing districts—diminishing, it is true, but still very great and grave—it might have been anticipated that the health of the population would reflect in some degree the unwontedly pleasant brilliancy of the spring. But flush health is not the universal concomitant of teeming harvests. It is too often the case that man sickens in his dwelling when the agriculturist is rejoicing in his bountiful crops and fruitful orchards. But the paradox is of man's making, not nature's. As long as he diligently creates for himself a local

atmosphere of filth, so long will the glorious sunshine, which to all nature else is but the spring-tide of an abounding maturity, be to him the ebb-tide of a swift decay. The death-rate of the past quarter exceeded that of any spring quarter since 1853. This is to be attributed chiefly to the prevalence of epidemic diseases, and more particularly of small-pox, scarlatina, and diphtheria.

Mr. Glaisher states that the period of five months which began with December and ended on the 30th of April was "as warm as any corresponding period in meteorological annals." From the beginning of April to the middle of May, with the exception of two days, the mean temperature was on an average 2° in excess daily. But after the 17th of May, for a period of nine days it was no less than 6° under the average. After this the temperature rose, and was 3·25° in excess until the 5th of June, from which date till the end of the quarter the air was cold. The mean temperature of April (49°) was higher than that of the same month in any year since 1844. Days and nights in April were warm; nights in May and days in June were cold.

For two years the public health had been better than usual; but in the last quarter of 1862 the mortality rose. In the first quarter of the present year the death-rate was above the average, and the excess continued in the quarter last terminated. The mortality of the past quarter was 2·313 per cent. per annum, whilst the average was 2·191. Ten years have passed since the death-rate of the spring quarter ranged as high as 2·3. In the chief towns the death-rate was 2·478 against an average of 2·336; in small towns and country places it was 2·102 against 2·031. "Summer-like weather in the early year," says the Registrar-General, "and cold days and nights striking a sudden chill into the heart of it, produce effects from which neither city nor hamlet is exempt."

The population of the metropolis suffered in common with the provincial populations, and in its due proportion. The complaints directly traceable to meteorological causes—bronchitis and pneumonia—were little if in any degree more fatal than common; but small-pox and scarlatina were very prevalent and fatal. The deaths from small-pox in London numbered 788, or nearly 9 daily; the deaths from scarlatina and diphtheria, 1230. Small-pox was general throughout England, prevailing more or less in every registration district, except Monmouth and Wales. Scarlatina and measles were very prevalent and fatal in the Northern districts. The deaths in London rose from 15,230 and 15,695 in the June quarter of 1861–62 to 17,417 last quarter. Those in the North-Western counties rose from 17,576 and 18,017 to 19,467; those in Yorkshire from 11,600 and 11,916 to 13,339. The increase of mortality in Lancashire and Cheshire, as compared with the two previous seasons (9 per cent.) was less than in London and Yorkshire (13 per cent.)

"Taking particular districts of the cotton manufacture," says the Registrar-General, "there was an increase in Oldham; in Manchester and Warrington of 20 per cent.; in Chorlton and Wigan of 25 and 34 per cent. Measles and other epidemics were spreading through those parts. On the other hand, there was a decrease in Ashton, Preston, and Chorley, amounting in the last two districts to 20 per cent. or more. It is probable that fewer deaths have been registered in many districts in consequence of the emigration or removal of the inhabitants; for doubtless many villages besides Belmont, which, the Registrar writes, is 'almost uninhabited, owing to badness of trade,' complain of empty houses; but in reviewing the whole facts of the present return, they will be found to support the conclusion which former reports tend to establish, that sickness has not been aggravated nor the mortality increased by the distress which has prevailed, and which happily to a certain extent has now been subdued. It must be regarded as a providential interposition in favour of the under-fed and half-clad workmen and their families, that the period embracing December and four succeeding months was, in the words of the meteorological report, distinguished by a temperature higher than in any corresponding period since 1771."

Further, the Registrar-General writes:—

"The improvement in the cotton districts, by which forty-seven local committees have been enabled to suspend operations, has arisen from various causes: the emigration or removal of operatives; the increase of out door work; the partial revival of industry. The Public Works Act, if adopted, and carried into execution with earnestness and good will, is expected to provide the wages of labour to a fifth or sixth part of the population who without its aid would be in want. But notwithstanding present encouragement, the Central Executive Committee takes a desponding view of the coming winter. Those external conditions of the cotton trade from which the ruin of the manufacture sprang remain unchanged, and there is little prospect of that cheapness of material on which former prosperity was based. Present alleviations of the distress will, some of them, cease when summer and autumn have passed. Private savings are spent; credit exhausted; relief funds diminished. Therefore it is not unreasonable to anticipate that though the distress of the coming winter may visit fewer hearths, its severity, where it falls, may be greater, because the means of relieving it are less."

The Registrar-General hopes that the Public Works Act will be effective for the removal of that unfavourable distinction in mortality which has long characterized the North-Western district.

## ACTIONS AGAINST MEDICAL MEN.

THE crop of actions against practitioners of medicine seems by no means exhausted; and the lukewarmness which has been exhibited in some high and privileged quarters on the matter, and the readiness to indulge in loose tattle and idle jealousies, may yet prove fertile in more of this bad seed. Fortunately the result is nearly in every case triumphantly to vindicate the character of the medical man attacked, although at the cost of considerable annoyance and trouble. In another column we publish some details of a most infamous and disgusting attempt to blast the reputation of a medical practitioner, obviously founded on the Cheshire model. The absurd and disgraceful action which we lately mentioned as being threatened at Birkenhead against one of the surgeons of the hospital there, in respect to a case of comminuted fracture treated with unusual success, has at last been abandoned, and the record withdrawn. Meantime, however, we hear of two in progress—one against all the surgeons of a northern hospital, and the other against a general practitioner in London for placing under necessary restraint a person suffering from delirium tremens.

There is only one way to meet the disgraceful attacks which are now being made in the law courts upon our profession: it is by resisting pecuniary compromise, which is commonly pressed as a first alternative, and boldly facing the temporary annoyance. Experience has shown, and we trust will yet show still more forcibly, that those who come into court with clean hands to uphold their professional characters against unjust attacks or mere attempts at extortion will not fail to secure general sympathy and professional support.

## ARMY MEDICAL EXAMINATIONS.

WITH an ominous rapidity, suggestive of manœuvres similar to those employed last year to hide the nakedness of the land and conceal the extreme unpopularity of the oppressed medical service of the army, we learn that the number of candidates for army medical appointments on the general staff has been suddenly swelled. Last season there were up to the last moment but thirteen candidates for forty appointments. At the eleventh hour the poorest schools were swept and some forty-five candidates gathered together; but of these only fourteen could pass muster as at all fit for commissions, and the rest were rejected. Fortunately the examinations were, by the late Director-General, Mr. Alexander, and with Lord Herbert's assent, placed in the hands of able and independent men, and assuredly they will not permit their indulgence to extend so far as to pass obviously incompetent persons. The examiners are Dr. Parkes, Mr. Paget, Mr. Busk, and Dr. Hooker. The

number of vacant appointments is seventy-five, and fifty candidates for commissions have now sent in all necessary certificates for going up to the competitive examination. The profession will be curious to know how many of them are from the Irish schools, and what proportion pass the examiners.

## MANSLAUGHTER.

At the Western Assizes lately, the Lord Chief Justice, in charging the jury, referred to several cases of manslaughter which would be preferred before them, and all of which offered points of medical interest. He observed that there was a charge of manslaughter which he commended to their particular attention before they decided whether they would find the bill. The deceased was an orphan taken from the poorhouse. She had been placed in the service of the husband and wife against whom the charge was brought. There was a statement made by the neighbours that the child had been treated with cruelty, and that that cruelty had accelerated the death. The parties were not liable unless the jury were satisfied that there had been some unlawful act on the part of the accused which was proximately connected with the death. A scanty supply of food or anything of that kind would not constitute the offence of manslaughter. If they thought that there had been ill-usage which was proximately connected with the death, they would find the bill. There was another charge of manslaughter which he would also commend to their particular attention, where death was said to have been produced by want of skill in medical attendance. The accused had acted as midwife for many years. She had used a pair of scissors, which had caused the death of the child; that might be said to be unskilful. It was said that the woman had taken a large quantity of gin. If the want of skill arose from drunkenness, that would be an offence. It must not be forgotten, with respect to the want of skill, that the accused was a person in humble life, and was within the fee which poor people could command. There were two charges of manslaughter which could not be maintained in their present form, and the matter was worthy the attention of the legislators of the country. The law should be amended to meet such cases, so that evading assistance should be a criminal act. If the intention of the mother was that the child should die, it was murder, and not manslaughter, and the verdict of the coroner's jury could not be maintained.

## A NEW WARRANT FOR THE MEDICAL OFFICERS OF THE INDIAN ARMY.

WE understand on good authority that it is decided there shall be an Indian medical staff corps separate from the army medical staff for general service; and very shortly a Warrant may be expected, defining the rates of pay, emoluments, and retirement for this local staff. The firm remonstrances of the medical officers and the support of their civil brethren will be found, we believe, to have affected these terms favourably; and as a liberal provision is therein promised according to length of service, it is anticipated that the Warrant will prove attractive.

## DR. LETHEBY ON SMALL-POX AND VACCINATION.

DR. LETHEBY refers in his recent quarterly report on the Sanitary Condition of the City, to the recent outbreak of small-pox, and to the increase in the City of scarlatina. He remarks that these sudden and severe outbursts of zymotic disease show that the force of these maladies is not exhausted by sanitary measures, but only kept in check; and that when occasion serves, as in this instance, by the neglect of proper precautions, the force manifests itself with all its original vigour. In the case of small-pox, which has twice appeared among us in an epidemic form during the last three years, it is evident that the disease has acquired the mastery through a disregard of proper and effective vaccination. A sort of vaccination has, no doubt, been performed, and a false confidence has been placed in its protective power, but it has utterly failed to ward off the attacks of the disease, or even to modify its severity. In the course of this and the former epidemic of 1859–60 he had caused inquiries to be made into the particulars of 508 cases of the disease, 108 of which were fatal; and he was told that in 323 of these vaccination had been performed in infancy, and that the operation had taken well. He had had no opportunity of ascertaining whether, in these cases, the evidences of successful vaccination still remained upon the arm; but he had no doubt that in a large proportion of them the operation was done in an imperfect manner; it was merely a formal act; the arm was punctured and the wound touched with lymph that had no power in it, and there was an end of the matter. In all probability the case was never seen again, and as there was a little irritation, or perhaps a false vesicle, upon the arm, it was thought that the operation was successful and complete. This is the danger, for it afforded no protection to the patient. Again, he ascertained that 114 of the cases had not been vaccinated at all, and of these 44 died. This is the usual mortality. Mr. Marson, the resident surgeon of the Small-pox and Vaccination Hospital at Highgate, had stated that in the course of his large experience he found that when small-pox attacked persons who had not been vaccinated it killed 36 per cent. of them—that is, one in every three died; but when vaccination had been performed, the death-rate of those attacked by the disease fell to 6·76 per cent., or to one in every 15. And, more remarkable still, he found that the protective power of vaccination was in proportion to the way in which it had been done. If after the operation there remained permanently on the arm but one scar or cicatrix, the mortality from the disease was 7·57 per cent.; if two scars, 4·13 per cent.; if three, 1·85 per cent.; and if four scars, not one in a hundred died, the mortality being only 0·74 per cent. But then, again, not all who have been merely cut in the arm and, as they think, vaccinated, are protected; for, though the operation may have been done in infancy, if no scar remains, 22 per cent. will die if they catch the disease. It is the remaining scars, therefore, upon the arm which tell of the success of the operation, and of the protective power of it. And not alone does it save from death when the disease has come, but it is far more powerful in keeping off the disease altogether. With these facts—and they have been before us for many years—is it not strange that some more effective measures are not taken, even by the people themselves, for the universal and proper performance of vaccination? It would seem that there is a feeling of carelessness about the necessity for the operation, and even when it is done no pains are taken to ascertain if it has been successful or not. There is manifestly wanted a means of determining what relation exists between the number of children born and the number of successful operations. There is also wanted a better means of insuring and maintaining the power of vaccine lymph. At present it is more than doubtful whether the processes adopted for the preservation of the lymph are not all imperfect; and, seeing how much more successful is the operation when performed with lymph taken at once from the ripe vesicle upon the arm, and not from dried points or capillary tubes, it is an important question whether in every large town, where it is so easy to keep up a constant succession of cases, this should not be the invariable method of performing the operation. To this end the number of vaccinators should be reduced as far as possible, and it should be the task of one or two officers to perform this duty for a large district. The advantage of such an arrangement would not only be in the perfect conservation of the lymph, but also in the proper performance of the operation; for, although it seems but a very simple affair, it really requires a great amount of skill and experience to insure its success. These observations are forced on us by a contemplation of the frightful effects which these epidemics occasion; and it is only while the force of the disease is in action, and the danger is imminent, that the public can be brought to regard the matter in a proper light and with sufficient attention. Therefore it was he had brought it so prominently under notice. Dr. Letheby further adds that the inquiries which he had instituted showed how terribly the disease spreads in the crowded districts when it once gets a footing. He knew instances of every member of the family being stricken with it, and of from five to thirteen persons in a house being affected. He mentioned Blue Hart-court, Golden Lion-court, Elliott's-court, Turner's-square, and

New-street, Cloth-fair, as examples where the disease had so prevailed. All these, he says, are places where the poor are congregated, and where the habits of the people are not cleanly.

# Correspondence.

"Audi alteram partem."

## IS AMAUROSIS PRODUCED BY TOBACCO?

*To the Editor of* THE LANCET.

SIR,—If the subject of the impairment of vision by tobacco-smoking is to be seriously entertained, it is very desirable that the grounds of that opinion should be stated with intelligible consistency by those who affirm it.

It was difficult to understand how Mr. Wordsworth could connect the atrophy of the optic nerve which he described lately in three patients with the habit of tobacco-smoking, from the clinical facts associated with those cases, and especially from what we know of the general pathology of that disease; it is still more difficult to understand by what logical process he can find satisfaction in quoting the observations of M. Sichel, who has found in his cases the optic papillæ "sometimes pale and sometimes reddened," and "the ophthalmoscopic signs generally negative or but little marked."

I repeat that optic atrophy is a diseased condition which is found in children and women and abstinent adults, as well as in adults who smoke tobacco; that it is not found in thousands of hard smokers, and that many who are most seriously affected with it never tasted the flavour of tobacco. We know it to be commonly the result of tumours, effusions, and alterations in brain-structure, certainly unconnected with smoking. At present there is nothing but arbitrary assertion to connect the two, and all the facts are on the other side. It is obvious that the onus of proof lies with those who assert this singular pathological connexion.

It is for Mr. Wordsworth to adduce something like satisfactory clinical evidence of his proposition, and to find support less equivocal than that which he can derive from reference to observations which are, when examined, found to be wholly opposed to the views as to optic atrophy which he has advanced.

However some may think that social interests may be furthered by putting forward any theory which is likely to discourage the use of tobacco, yet moral evils are not well combated by a fashionable complaisance on the part of men of science. The medical opponents of tobacco have now cried "Wolf!" so often and so causelessly, that they begin to weaken our legitimate influence in respect not only to this matter but to others of a like nature. The terrible utterances of these gentlemen appear to me now to have reached the climax of paradox, when we find Dr. Richardson, (after running over nearly the whole gamut of disease, and finding everywhere the influence of this herb,) quoting amongst others Mr. Wordsworth for the statement that tobacco causes atrophic wasting of the visual nerve, but ending with the declaration that tobacco may be considered less hurtful than many other luxuries, especially sugar; and when we find Mr. Wordsworth, on being put to the proof, produce three utterly inconclusive cases, and fall back on the support of a surgeon who makes a declaration that the ophthalmoscopic signs of tobacco-smoking are "obscure and little marked."

To that obscurity I believe, Sir, they are destined to return; for indefinite diseases shrink from the light like other phantoms, though it be only the light of an argand burner reflected by an ophthalmoscopic mirror.

I am, Sir, yours very truly,

Wimpole-street, Cavendish-square, Aug. 1863. ERNEST HART.

## RHEUMATOID ARTHRITIS.

*To the Editor of* THE LANCET.

SIR,—I beg to send you a few notes of a case of rheumatoid arthritis similar to that reported by Dr. Gibb in your journal of the 1st instant:—

Mary Anne B——, aged thirty, was shown to me at the dispensary, June 30th. For the last eight months she has felt and heard a peculiar creaking, almost grating, noise in the right knee-joint, both on flexion and extension of the limb. The sound is loudest on extreme flexion, and comes from under the ligamentum patellæ. On comparing the two knees there is no marked difference in shape or feel between them. No other joint is, or has been, affected with a like creaking. General health feeble; no history of rheumatism. Blisters have been tried, iodine in various shapes and forms, also mercurials, but no benefit has resulted. Her general health has improved much. Citrate of iron and quinine was ordered, but the knee is noted on July 23rd as being in no way improved.

About four years ago I saw a man about forty years of age who had a most unpleasant grating noise in both shoulders. He had had this for two years, and it seemed connected with syphilis. The syrup of iodide of iron, in large doses, for two months seemed of some value in this case.

Yours obediently,

August, 1863. JOHN C. THOROWGOOD, M.D. Lond.

P.S.—So far as my judgment goes there does not seem a better name for these joint affections than that of Rheumatoid Arthritis. Like rheumatism and general rheumatic affections they most certainly are, and that they originate in chronic or subacute inflammatory action in or about the joint is, I think, tolerably certain.

## STATISTICS OF VACCINATION.

*To the Editor of* THE LANCET.

SIR,—I am collecting statistics on the subject of vaccination and revaccination. May I ask the favour of the insertion of this communication in your journal. To those members of our profession who have made observations, and are willing to correspond on any of the following questions, a letter addressed to me will greatly oblige:—

*Primary vaccination.*

1. Medium of communication. Whether from cow direct, vesicle of primi vaccinati, vesicle of revaccinati, ivory points, glasses, bottle, capillary tubes, or purchased lymph.
2. Proportion of success to failure in primi vaccinati through any or all of the media.
3. Proportion of mature vesicles in primi vaccinati on fifth, sixth, seventh, eighth, ninth, or subsequent days.
4. Proportion of primi vaccinati in whom erythema, enlargement or suppuration of glands, or other symptoms of absorbent mischief have occurred.
5. Whether traceable to struma in the vaccinati or in the subject whence the lymph was obtained.

*Revaccination.*

1. Medium of communication.
2. Proportion of success to failure.
3. Number of times of revaccination before failure is recorded.
4. Result in persons who have had small-pox.
5. Result in persons who have been inoculated.
6. Number of days required for maturity of vesicle.
7. Time elapsed since last vaccination or revaccination.
8. Evidence of successful vesicle—1st, by appearance of vesicle; 2nd, by appearance of cicatrix.
9. Cases of insusceptibility to vaccine virus.
10. Results in children who have had intra-uterine small-pox.
11. Proportion of revaccinati in whom absorbent mischief has occurred.

I am, Sir, your obedient servant,

METCALFE JOHNSON, M.R.C.S.,

Lancaster, Aug. 1863. Public Vaccinator.

## STUDY OF EPIDEMIC CHOLERA AND THE ARMY MEDICAL DEPARTMENT.

*To the Editor of* THE LANCET.

SIR,—With reference to the letter from Dr. Macloughlin in your impression of the 25th of July relating to cholera, I beg leave to say that Dr. Gibson has probably opposed the inquiry suggested by that gentleman for a good reason—viz., because he knows that the disease has been studied scientifically by many army surgeons who have had a far greater experience in it than Dr. Macloughlin, and also by a Brown-Séquard, who was with us attentively studying the disease during the fearful epidemic in Mauritius in 1854, when four of our number died, in and near the small town of Port Louis.

In this epidemic, as also in that of 1856, post-mortem examinations were made, every treatment known was tried, with some good results it is true, and every theory was studied; and as regards the electricity and ozone theory, the quantity in the atmosphere was registered daily by myself, and handed in to the Army Medical Department. I need hardly say that the invariable premonitory diarrhœa of Dr. Macloughlin has been proved in India and Mauritius to be a fallacy. He may still persist in his declaration to the contrary, like the Federals in their victories; but when army surgeons declare that they have seen men suddenly roll up in a ball, get cold and blue, and die within two hours, without diarrhœa, and have seen the vomiting commence first, or be present without diarrhœa, the opinion of Dr. Macloughlin will very likely carry but little weight with the profession. The diarrhœa he dwells on is too often the true cholera, and frequently nothing will arrest it; whereas many men suffer from simple diarrhœa throughout a cholera epidemic, without any ill effects, it not arising from the same cause. Is it likely that such men as Professors Longmore and Maclean have not studied scientifically the disease in the Crimea and India?

Dr. Macloughlin will find many of us able and willing to prove that he is not ahead of us in the study of the disease, and also to bear testimony that Dr. Gibson has wished to assist us all in studying this and other diseases, as far as lies in his power.

I have the honour to be, Sir, yours obediently,

H. R. FRANKLYN,

The Curragh Camp, August, 1863. Surgeon, 1st Batt. 10th Foot.

## ON THE SMALL SIZE OF THE SPLEEN IN LUNATICS.

*To the Editor of* THE LANCET.

SIR,—In a paper by Mr. P. W. Jones, published in last week's LANCET, the very small size of the spleen (two drachms) in a lunatic patient is noted amongst the post-mortem appearances. An interesting paper on this subject by Dr. John Wilson, F.R.S., has been recorded; and you did me the favour to publish a note of mine on the same subject in 1854. I think the condition of the spleen is worthy of the attention of those who are specially engaged in investigating the etiology and pathology of lunacy, although, in the present state of our knowledge, it might be rash to affirm that the fact alluded to can have any practical bearing on psychological medicine.

I am, Sir, your obedient servant,

Kidderminster, August, 1863. JOHN ROSE, M.D., Surg. R.N.

## "THE LANCET" MEDICAL FUND FOR LANCASHIRE DISTRESS.

THE Committee, having regard to the actual mitigation of the distress in the cotton districts owing to the season, and to the probable extension and aggravation of suffering in the approaching winter, have resolved to postpone the issue of further grants. The balance in hand amounts to £128. The Committee, in the mean time, desire these gentlemen who have heartily aided them by undertaking the duties of almoners to receive their best thanks. The Committee trust, when the season for renewed exertion shall return, again to have the advantage of their assistance.

## MEDICAL TRIALS.

### FORFAR SHERIFF COURT.

POOR CUTHILL *v.* HERD.

JUDGMENT in the following case was given by Sheriff Robertson on Thursday, the 30th ult.:—

This was an action for filiation and aliment against a medical practitioner in Forfar, who, it will be seen, has been assoilzied.

The Sheriff-Substitute, having heard parties' procurators, and advised the whole case, for the reasons contained in the subjoined note, finds that the pursuer has failed to prove that the defender is father of her child libelled: Therefore sustains the defence, and assoilzies the defender from the conclusions of the summons: Finds the pursuer liable in expenses and decerns.

(Signed) ALEX. ROBERTSON.

*Note.*—The defender is a medical practitioner in Forfar, and the pursuer is a poor woman residing there. The defender was ordered to visit the poor by the parochial board, being at that time a medical officer to the board. The pursuer admits that one of the complaints under which she was suffering, and for which she was treated by the defender, was of a private nature. The defender, in the discharge of his duty, was bound to regard it as such, and private interviews between the parties were then necessary.

Under these circumstances, the Sheriff-Substitute is of opinion that an unusually strong case must be brought out by the pursuer in order to fix the paternity of her child upon the defender. The Sheriff-Substitute has no hesitation in saying that the evidence, as led by the pursuer, is not such as to warrant a decision in her favour.

Her story is unusually disgusting and improbable. The first act of connexion deponed to took place in her own house, without the defender ever having attempted liberties with her; and this act is entirely without corroboration of any sort or kind.

The next act spoken to is said to have been in defender's own house, in a room off the defender's sitting-room, where a friend of the pursuer's was waiting for her. The pursuer and her friend had gone to consult the doctor, who admits that he took the pursuer into a room apart, because the question he wished to put to her regarding her health was unfit for her friend's ear. A bed was in this room, and it was the only other room the defender had to take pursuer to. The friend (Lakie) says that no question of a private nature was asked in her presence. The pursuer says the same, but on cross-examination she says the doctor asked her about her private complaint when Lakie was present. Independently of the obvious reason for the defender taking pursuer aside on this occasion, it is most unlikely that he would have connexion with the pursuer under the circumstances. The door between the rooms was not bolted, and the defender knew quite well that the pursuer's friend was waiting, and would at once suspect anything improper between them. The Sheriff-Substitute cannot believe that, if the defender is the designing man the pursuer attempts to make him out to be, he ever would have taken this opportunity for having connexion.

Lakie and pursuer both say that a quarter of an hour elapsed before this private interview was concluded. The defender denies this. This is the only part of the pursuer's case where she meets with anything like an important corroboration. But the Sheriff-Substitute can never bring himself to believe that the time spoken to by these girls was as long as they say it was.

Then the horrible attempt at abortion is not in any way corroborated, and is most improbable. The pain the pursuer suffered she swears to have been greater than child-bed; and yet, though three women lived on the same floor as the pursuer, no cries of distress were heard by any of them. This alleged attempt at abortion took place on a Tuesday, and yet by Saturday no one is told of it. Even on Saturday the pursuer did not allude to it.

Then the pursuer denies ever having stated to Mr. Dargie that the defender was not the real father. Mr. Dargie directly contradicts this.

In short, the whole case proved against the defender is that some irregularity is shown in entering his visits to pursuer in his medical reports and diaries—that he was often alone with the pursuer—and that a discrepancy exists between his evidence as to the time he and pursuer were alone together in his house, and between the evidence of pursuer and her friend on this point. If a medical man is to have his reputation blasted upon such evidence as this, the result will be that no practitioner can ever with safety be alone with a female patient for a moment; and that, if a female patient has any complaint of a private nature, a third party ought invariably to be present at any necessary operation, as a witness to the decorum of the medical gentleman who performs it.

If the pursuer's story is true, her case is a hard one; but not more so than the defender's would be if her story be false.

(Intld.) A. R.

*Montrose Standard*, August 7th.

*** The facts of this case are so closely similar to those which have recently occupied public attention at Chester, that they assume a value which removes it from the category of vulgar crimes. It affords a further illustration of the difficulty medical men have to encounter in the discharge of their professional duties, and also of the necessity, as we have already indicated, of using every precaution to prevent such gross charges having

any semblance of foundation for their support. Fortunately for the defender, his brother-practitioners seem to have abstained from interfering in the case, and so the impudent fabrication of the pursuer fell to the ground.—ED. L.

# Medical News.

UNIVERSITY OF LONDON.—The following are lists of candidates who passed the respective examinations indicated:—

## FIRST B.SC. EXAMINATION.

ENTIRE.

*First Division.*

Atkins, Edward, private study.
Killick, William Donald, London Hospital.
McDowall, Andrew, Highbury Training College.
Robertson, John, private study.
Robinson, Edward, Owens College, Manchester.
Stockton, William, Chester College.

*Second Division.*

Clarke, Frederick Kent, M.A. Camb., Clare College, Cambridge.
Cooper, Alfred, Cheltenham College.
Irving, William Parker, New College.
Kearns, Henry Ward, Kennington College.
McDougall, Arthur, Owens College, Manchester.
Pooley, Thomas Alexander, private study.
Prosser, Richard Bissell, private study.
Shawcross, William, private study.
Sprengell, Johann Chr. Friedrich Louis, Ph.D., Göttingen.
Woodward, Charles Josiah, Midland Institute.

EXCLUDING MATHEMATICS.

*First Division.*

Thomson, Alexander Morrison, B.A., private study.

*Second Division.*

Coupland, W. Chatterton, B.A., School of Mines and University Coll.

## BACHELOR OF MEDICINE.

PRELIMINARY SCIENTIFIC EXAMINATION.

ENTIRE.

*First Division.*

Adams, Arthur Bayley, London Hospital.
Bull, John Augustus, Guy's Hospital.
Brown, James Campbell, University of Aberdeen.
Buckell, Francis John, University College.
Bushell, Stephen Wootton, Guy's Hospital.
Dyer, William Turner Thiselton, King's College.
Gowing, Benjamin Chastor, Guy's Hospital.
Heathcote, Rowland, Royal Manchester.
Hulme, Samuel James, Royal Manchester.
Kelly, Charles, King's College.
McDougall, Arthur, Owens College.
Maybury, Augustus Constable, St. Thomas's Hospital.
Pooley, Thomas Alexander, private study.
Rogers, George Arthur, London Hospital.
Smith, Charles James Hardy, University College.
Spencer, George Owthwaite, University College.
Thomas, John Davis, University College.
Whitwell, John Maude, University College.

*Second Division.*

Aveling, Charles Taylor, St. Thomas's Hospital.
Barrett, Howard, St. George's Hospital.
Bateman, Francis, St. Bartholomew's Hospital.
Birtwell, Henry Hargreaves, St. Thomas's Hospital.
Bradshawe, Paris, King's College.
Buck, Thomas Alpheus, private study.
Carter, Richard, Charing-cross Hospital.
Cole, Thomas, St. Bartholomew's Hospital.
Eager, Reginald, Guy's Hospital.
Lethbridge, Charles Frederick, University College.
Madeley, George Sherwin, Royal Manchester.
Murphy, Thomas Charles, University College.
Poore, George Vivian, University College.
Sanders, Richard Careless, private study.
Sawyer, James, Queen's College, Birmingham.
Smith, John Ablewhite, Middlesex Hospital.
Smith, Robert Shingleton, King's College.
Tindall, Alexander Melvor, St. Bartholomew's Hospital.
Welch, John Burges, King's College.

CHEMISTRY AND BOTANY ONLY.

*First Division.*

Berry, Other Windsor, Charing-cross Hospital.
Cluff, James Stanton, B.A. Dublin, University College.
Edwards, Thomas Marsden, Andersonian Institution.
Fry, Augustus Barber, Guy's Hospital.
Gooding, Ralph, B.A., King's College.
Graves, Boydell, University College.
Grimes, John, King's College.
Howse, Henry Greenway, Guy's Hospital.
Hughes, John Pearson, University College.
Nelson, John Waller, Queen's College, Birmingham.
Orton, George Hunt, St. Bartholomew's Hospital.
Owen, David Charles Lloyd, Sydenham College, Birmingham.
Stuckey, John, University College.
Summerhayes, Henry, B.A., St. Thomas's Hospital.
Wagstaffe, William Warwick, B.A., St. Thomas's Hospital.

*Second Division.*

Lees, Joseph, St. Thomas's Hospital.
Metcalfe, Fenwick, King's College.
Provis, William Alexander, King's College.
Smith, Samuel Hignett, King's College.

FIRST M.B. EXAMINATION.

ENTIRE.

*First Division.*

Allen, Bryan Holme, University College.
Dean, Peter Maury, University and Surgeons' Hall, Edinburgh.
Duke, Olliver Thomas, Guy's Hospital.
Green, Thomas Henry, University College.
Mason, Philip Brookes, University College.
Powles, Hewett Coleridge, King's College.
Richards, Frederick William, St. Bartholomew's Hospital.
Savage, George Henry, Guy's Hospital.
Smith, Charles, Guy's Hospital.
Snow, William Vicary, University College.
Taylor, Francis Thomas, Guy's Hospital.

*Second Division.*

Birt, Joseph, Sydenham College, Birmingham.
Bond, Thomas, King's College.
Edwards, Thomas Marsden, Andersonian Institution, Glasgow.
Greaves, Charles Augustus, St. Thomas's Hospital.
Loah, William George Vawdrey, St. Bartholomew's Hospital.
Mackey, Edward, Queen's College, Birmingham.
Murray, Thomas, St. George's Hospital.
Powell, Richard Douglas, University College.
Squarey, Charles Edward, University College.
Trimen, Henry, King's College.

EXCLUDING PHYSIOLOGY.

*First Division.*

Hilliard, Henry Charles, Guy's Hospital.
Turner, Ebenezer Fulham, Guy's Hospital.

*Second Division.*

Glynn, Thomas Robinson, St. Bartholomew's Hospital.
Harvey, Walter Anstice, St. Bartholomew's Hospital.
Norton, Arthur Trehern, St. Mary's Hospital.
Read, Charles, University College.

PHYSIOLOGY ONLY.

*First Division.*

Best, Palemon, University College.
Edis, Arthur Wellesley, Westminster Hospital.
Phillips, John Jones, Guy's Hospital.
Rivington, Walter, B.A., London Hospital.
Robertson, Frederick Thomas, B.Sc., University College.
Smith, William John, University College.
Spender, John Kent, King's College.

*Second Division.*

Beddard, James, Guy's Hospital.
Cooke, John, University College.
De Negri, Athenodore, University College.
Gale, Henry Stanley, King's College.
Jakins, William Vosper, University College.
Manchester, Henry Thomas, St. Bartholomew's Hospital.
Langton, John, St. Bartholomew's Hospital.
Miller, Richard May, University College.
Simms, Frederick, King's College.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on the 6th inst.:—

Bird, William, Tarporley, Cheshire.
Durrant, William, Manchester-street, Argyle-square.
Groves, Joseph, King's College.
Jones, John James, Queen's-road, Peckham.
Larkin, Charles Robert, Bishop's Castle, Salop.
Prince, Charles Edward, Balsham, Cambridgeshire.

The following gentlemen also on the same day passed their first examination:—

Bennett, Francis Graham, St. Bartholomew's Hospital.
Blick, Thomas Edward, St. Mary's Hospital.
Hawthorn, Frederick John, London Hospital.
Owen, David Charles Lloyd, Sydenham College, Birmingham.
Taylor, Arthur, Guy's Hospital.

ROYAL COLLEGE OF PHYSICIANS AND SURGEONS, EDINBURGH: DOUBLE QUALIFICATION.—The following gentlemen have passed their First Professional Examinations during the recent sittings of the Examiners:—

Austin, Thomas Mein, Edinburgh.
Connellan, Edward, Cork.
Cosgrove, William D., Aberdeen.
Currie, Thomas, Elie, Fife.
Glover, Henry, Co. Down.
Kehoe, Thomas Bennett, Cork.
Newton, H. W., Newcastle-on-Tyne.
Shedden, Arthur W., Madras.
Smith, H. R., Berwick-on-Tweed.
White, Francis B. W., Perth.

The following gentlemen have passed their Final Examinations, and been admitted L.R.C.P. Edin., and L.R.C.S. Edin.:—

Crombie, John Liddle, Scone.
Dickson, George, Edinburgh.
Dickson, William Pringle, Bengal.
Dunlop, John, Lanarkshire.
Kiernan, Patrick Kane, Leitrim.
M'Lean, William Hepburn, Portsoy.
Malcolm, John V. T., Edinburgh.
Moffatt, Paul, Northumberland.
Pattison, George John, Ross-shire.
Robinson, Henry, Derbyshire.
Simpson, David James, Edinburgh.
Smith, David, Montrose.
Stevens, Wm. Goldie, Lanarkshire.

ROYAL COLLEGE OF SURGEONS, EDINBURGH. — The following gentlemen have passed their First Professional Examinations during the recent sittings of the Examiners :—

Aitken, George, Rutherglen.
Barbour, John B., Kirknewton.
Chiene, John, Edinburgh.
Cochran, Andrew, Strathaven.
Dobie, William, Langholm.
Duncan, Andrew James, India.
Elder, Lockhart, Edinburgh.
Elliot, James, Yorkshire.
Higgins, Thomas, Co. Derry.
Irvine, Wm. S., Londonderry.
M'Crea, Samuel, Belfast.
M'Dougall, John A., Galashells.
Macfee, John, Buteshire.
Mackay, John L., Thurso.
M'Loskey, Joseph, Londonderry.
Messer, T. J. Fordyce, Portobello.
Morris, Thomas, Kilrenny.
Orr, Adam, Clonmel.
Orr, John, Glasgow.
Pirie, John, Co. Tyrone.
Pullar, Albert J. Dotte, Edinburgh.
Purves, Wm. W., Edinburgh.
Robertson, James, Aberdeenshire.
Robson, John, Perthshire.
Taylor, James, Antrim.
Thorburn, D. Arno Smeat, Dumfries.
Walker, William, Grangemouth.
Watson, Robert, Dunformline.

The following gentlemen have passed their Final Examinations, and obtained the diploma of Licentiate of the College :—

Cameron, Lewis, Morayshire.
Charteris, Matthew, Dumfriesshire.
Craw, John, Earlston.
Cumming, William, Inverness.
Dickson, Archibald, Edinburgh.
Finlay, R. Bannatyne, Newhaven.
Fleming, Samuel, Co. Londonderry.
Goodall, Alexander, Fifeshire.
Mackay, John Talt, Caithness.
Marham, John Wm., Quebec.
Mercer, Niel Gray, Argyllshire.
Morson, A. K., Newcastle-on-Tyne.
Nicholson, Joseph Metcalfe, Leeds.
O'Brien, Eugene R., Co. Tipperary.
Pringle, John, Edinburgh.
Rhind, James, Stockport.
Robertson, John, Blair Athole.
Simpson, Adam Boyd, Co. Tyrone.
Tucker, David, Belfast.
Watson, James, Edinburgh.
White, Geo. Rankine, New York.
Wilson, James, Edinburgh.

UNIVERSITY OF ABERDEEN.—At the late graduation term, the following candidates, after the usual examinations, received degrees in Medicine and Surgery :—

DEGREE OF M.D.

Silver, Alexander, A.M., Marykirk.—Honourably distinguished.
Redfern, Thomas, Chesterfield.
Rowell, Thomas, Aberdeen.
Webster, Thomas Black, Oldmeldrum.

At the same time,

Leslie, David Arthur, A.M., M.B., Aberdeen,

was promoted to the degree of M.D.

DEGREE OF M.B.

Alexander, Charles, Aberdeen.
Burgess, Peter, A.M., Inveravon.
M'Robbie, John Strachan, Aberdeen.
Reid, John, Glenmuick.
Souter, John Clement, Aberdeen.
Sutherland, William, A.M., Aberdeen.
Thursfield, Thomas Greville, Broseley, Salop.

DEGREE OF M.C.

Burgess, Peter.—Honourably distinguished.
Alexander, Charles.
M'Robbie, John Strachan.
Redfern, Thomas.
Reid, John.
Rowell, Thomas.
Silver, Alexander.
Souter, John Clement.
Thursfield, Thomas Greville.
Webster, Thomas Black.

At the same time the following were declared to have passed part of their examinations :—

Campbell, George MacIver.
Center, William.
Clark, Stewartson.
Copland, James.
Cottingham, John Forbes.
Davidson, James.
Farquharson, Robert Alexander.
Gage, James Thomas.
Grant, Alexander Gibb.
Harper, Ebenezer Erskine.
Henderson, James Foote.
Johnston, Alexander.
Knox, John.
Livingston, John.
Maconachie, John.
Macrae, Godfrey Alexander.
Macrae, Alexander Edward.
Manson, Patrick.
Matthews, Josiah Wright.
Murray, John.
Muskett, Edwin Burrell.
Paterson, William.
Robertson, William.
Simpson, John.
Skeen, Andrew.
Smythe, William Stewart.
Stewart, William Henry.
Thomson, George.
Watt, Thomas.
Wheldon, Alfred Harold.
White, William Leavens.
Wilson, John Kenneth.

THE BRITISH MEDICAL ASSOCIATION. — The annual meeting of this Association was held last week at Bristol, under the Presidency of Dr. Symonds. The Addresses were delivered as follows :—Medicine, Dr. W. Budd ; Surgery, Mr. Augustin Prichard ; Midwifery, Dr. Swayne ; Chemistry, Dr. Bird Herapath. The President delivered an eloquent address, papers were read on various subjects, and the meeting terminated with a public dinner. The practitioners of Bristol received their visitors with general and liberal hospitality.

UNIVERSITY OF ABERDEEN. — Dr. John Struthers, F.R.C.S., Lecturer on Anatomy at Surgeons' Hall, Edinburgh, has been appointed to the Professorship of Anatomy in the University of Aberdeen, vacant by the resignation of Dr. A. Lizars. This appointment cannot fail to give general satisfaction to the profession. Dr. Struthers is a most accomplished anatomist.

A ROYAL GIFT.—His Royal Highness the Prince of Wales has forwarded a donation of £100 to the Devonport, Stonehouse, and Cornwall Hospital.

CHOLERA AT BOMBAY.—A sharp visitation of cholera in Bombay has carried off several Europeans, but the scourge has now disappeared.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—A Society under this title has been formed in Bradford, Yorkshire, for the reading and discussion of papers. Two successful meetings have been held.

A NEW HOSPITAL AT COVENTRY is in contemplation, but the committee have great difficulty in finding a site. The Freemen's Trustees, who have ground suitable for the purpose, are not able, without a special Act of Parliament, to dispose of a freehold.

LONDON HOSPITAL. — On the 8th ultimo the House Committee of this hospital presented the gold medals for proficiency in medicine and surgery, respectively to Mr. Nathaniel Heckford, of Forest-gate, Essex, and Mr. Herbert Spencer, of Ackworth, Yorkshire.

WOOLWICH MILITARY HOSPITAL.—The additional wing to the auxiliary hospital recently erected at Woolwich has been completed for the reception of female patients belonging to the soldiers of the garrison ; the expenses are to be defrayed by voluntary contributions.

SCOTCH LUNATICS.—Dr. James Coxe, to whose energies the startling announcements made in the Report of the Royal Commission of Inquiry into the State of Lunacy in Scotland are chiefly attributable, has, we are happy to see, received the honour of knighthood.

THE DUNDEE MORGAN HOSPITAL.—The foundation-stone of this building has just been laid. It is to be of two stories in height, with a centre tower 120 feet high. The form will be quadrangular, 200 feet broad, and 120 deep. The cost is estimated at £15,000.

HOSPITAL BEQUESTS IN ITALY.—The late Count Galli, in his will, appoints the hospitals of Tuscany as sole heirs of his property, which consists of about half a million of crowns. The division of the money is to be regulated according to the number of beds.

ST. THOMAS'S HOSPITAL.—At the last meeting of the Metropolitan Board of Works, it was agreed that the land to be devoted as a site for the new hospital at Stangate, occupying about eight acres and a half, was to be purchased at the price of £95,000, the Board agreeing to make the embankment and level the ground by the 31st of December, 1865.

GARIBALDI.—Dr. Albanese writes from Caprera that the general's wound has been cicatrized since the 11th ultimo. Garibaldi now rides on horseback, and will, in a couple of months, lay by his crutches and use simply a stick. By the steady use of cold douching, the foot moves more easily, and it is to be hoped that, eventually, the patient will walk without much halting.

ROYAL BOTANIC SOCIETY, REGENT'S PARK.—The last report of this Society states that the gardens have been of great use to professors, students of medicine, and artists, in their studies, 165 students having had gratuitous admission, and also that above 22,000 specimens have been distributed to professors at the various hospitals and medical schools to illustrate the lectures.

LONDON INQUEST ON A DEATH OCCURRING AT ANTWERP. —It is believed that the first inquest held in this country on the body of a person who died abroad was held last week by Mr. Walthew, the Deputy-Coroner for East Middlesex. John King, a youth employed on board the *Dolphin*, was drowned in the Scheldt while bathing, and carried out to sea, where he was picked up by his ship, and brought to England.

THE DEATH OF SIR W. F. SLADE.—The sudden and melancholy death of Sir Frederick Slade, Bart., following so closely on that of Sir Cresswell Cresswell, was attended by circumstances of considerable medical interest. The late learned baronet was deeply affected by that sad event, and seems to have allowed the occurrence to prey upon his spirits. On Friday (7th inst.), in the Assize Court at Wells, he mentioned the circumstances to a friend in court, and observed that "no one knew who had a diseased heart, and God only knew who should die from it next." He returned to his seat, Maunsel, near Taunton, and in the course of the evening complained of pain in the chest, together with symptoms indicative of great nervous depression. No apprehensions were, however,

entertained that anything serious was the matter. Mr. W. A. Summers, of North Petherton, was sent for, who prescribed the necessary remedies. The learned baronet seemed to recover in a great degree his usual cheerfulness, and expressed himself relieved from those symptoms of which he had been complaining. He retired to rest at an early hour. At twelve o'clock he was seized with a fit, and almost immediately expired. Mr. Summers stated at the inquest that some fifteen months since Sir Frederick had been similarly affected, and soon recovered. He was of opinion that death was due to apoplexy, the result of fatty degeneration of the heart. No post-mortem examination was, however, instituted.

ILLEGAL PRACTICE IN FRANCE.—At the Tribunal of Correctional Police, at Paris, the "Black Doctor," J. H. Vriès, was convicted on a charge of illegally practising medicine; "Dr." Ebra, who assisted Vriès, was also convicted of illegally vending medicines. Vriès was fined 2000 francs for illegal practice, and 500 francs for selling medicines. Ebra was fined 500 francs for selling only; the costs of the conviction to be divided between them.

ENTHUSIASTIC FAREWELL TO AN ARMY SURGEON.—A very graphic and spirited account is given in the *Delhi Gazette* of one of the most gratifying occurrences that has lately taken place respecting a member of our profession in India. It records the departure of Dr. Chambers from the 35th Regiment, to which he had been attached for sixteen years. On the 2nd of June, a dinner was given to him by the officers, when his health was drunk with the most marked demonstrations of respect, the cheers being re-echoed by nearly the whole of the men of the regiment, who had assembled outside the mess-house. His health was then drunk by the non-commissioned officers, who were called in, as well as by the soldiers, one from each company being present. On the 4th, after a farewell dinner with the colonel, Dr. Chambers left the cantonment, his carriage being drawn by a large party of soldiers; and when he got into his "palky" he was borne by as many of the officers as could find room under the poles. An escort was also formed of the officers, civilians, and ladies. The women and children of the cantonment witnessed his departure with evidences of strong emotion.

POST-MORTEM EXAMINATIONS IN UNION WORKHOUSES.—Dr. Prior, one of the medical officers of the Bedford Union, has recently made an unauthorised post-mortem examination of a patient against the protest of the master, and before the friends of the deceased had viewed the body. Dr. Prior was consequently summoned to a meeting of the guardians, when the following communication from the Poor-law Board was read:—

"It is only required that a statement of the apparent cause of death should be inserted in the return. In no case do the Commissioners desire a post-mortem examination to take place solely for the purpose of satisfying this rule, except by the direction of a coroner, when holding an inquest, or of a board of guardians, for any urgent, special, or peculiar reason which they may deem of sufficient importance to render such an examination necessary; or at the request of the nearest relatives of the deceased. The Commissioners deem that the medical officer would not be justified in making such a post-mortem examination."

They add that they "think that the guardians would hardly be justified in directing, in any particular case, that a post-mortem examination should be made, if the nearest relatives of the deceased objected clearly and decisively to that course."

[Dr. Prior, in addition to being one of the officers of the Bedford Union, is Coroner for Bedford. He is no doubt in a position to give a sufficient explanation of his conduct in this matter. However, a pertinent question suggests itself,—If a post-mortem examination were really necessary, was not a coroner's inquest of equal importance? We have no desire to prejudge the case upon the imperfect information conveyed in the above report, but some explanation from Dr. Prior is undoubtedly called for.—ED. L.]

DEATH-RATE IN SMALL-POX.—Mr. Marson, the resident surgeon of the Small-pox and Vaccination Hospital at Highgate, states that of unvaccinated persons who are attacked 36 per cent. die, whilst of those attacked after vaccination the mortality is 6·76 per cent., or 1 in 15. And, further, that if after the operation there remains permanently on the arm but one scar, the mortality is 7·57 per cent.; if two scars, 4·13 per cent.; if three, 1·85 per cent.; and if four scars remain the mortality is reduced to 0·74 per cent. Facts like these, backed by the experience of a man like Mr. Marson, ought surely to be sufficient to silence, if not to convince, the rabid opponents of vaccination. We should have been glad to learn from a gentleman of the unusual experience of Mr. Marson the influence which revaccination exercises upon the occurrence and fatality of small-pox. What is the real influence of secondary vaccination? At what period should it be performed? Is it necessary immediately after puberty or at the termination of every seventh year? These are questions of vital import, and no doubt Mr. Marson will feel it his duty to give an answer to them. Without anticipating his reply, we may state that in a practice of no inconsiderable extent not a single case of small-pox has occurred after revaccination. There is no question in which the public are interested that has a more important bearing upon the general welfare than this. There is none, probably, upon which there is a greater diversity of opinion. The records of the Small-Pox Hospital, we think, ought to afford something like a satisfactory answer. It would be greatly conducive to a settlement of this question if Mr. Marson would state his experience upon this point. No man is more competent by his long experience, and by the unbiased judgment which he can give upon such a matter, to relieve the anxiety of the public upon a disputed question than the highly respected resident surgeon of the Small-Pox and Vaccination Hospital.

THE HOSPITALS AT GETTYSBURG are said, by a correspondent of a New York paper, to have been in a dreadful condition after the battle. Medical stores, and even food, were deficient, and only one-third of the surgeons could be allowed to remain with the wounded. The number of Federals wounded was at least 20,000, and filled every available habitation. Many were looking forward, after six days' suffering, to the amputation of their limbs as an unspeakable blessing. The Confederate wounded were still more deplorably situated, as there were only five surgeons to about 6,000 wounded, with very few attendants.

A SURGICAL VETERAN.—In our list of deaths this week will be noticed the name of Mr. Charles Henry Phillips, an amiable and much-esteemed surgeon, who had long retired from the practice of his profession and had outlived many of his early friends and associates. Mr. Phillips became a Member of the College of Surgeons in 1812. He served in the army as Assistant-Surgeon in the Grenadier Guards, and subsequently held the appointments, first of Surgeon-Extraordinary to King William the Fourth, and then of Surgeon to his Majesty's Household.

## MEDICAL VACANCIES.

Islington Dispensary—Two Surgeons, vice Messrs. Shillitoe and Watson, resigned.
Western General Dispensary—Resident Surgeon and Apothecary.

## MEDICAL APPOINTMENTS.

O. H. BELL, M.D., has been appointed Professor of Medicine in the University of St. Andrews, vice G. E. Day, M.D., resigned.

H. BRICKWELL, M.R.C.S.E., has been elected Medical Officer for the Warboys District of the St. Ives Union, Huntingdonshire, vice W. Lowe, M.R.C.S. Eng., resigned.

Dr. BROWN has been appointed Certifying Surgeon of Factories for Preston, in the place of Mr. D. F. Moore, deceased.

T. BURKE, M.D., has been elected Medical Officer to the Scariff Union Workhouse, Co. Clare, vice J. O'Brien, L.R.C.S.I., deceased.

T. C. BURTON, M.D., late of the Clonmel Auxiliary Lunatic Asylum, has been appointed Superintendent of the Waterford Lunatic Asylum, vice Dobbs, resigned.

R. T. GRUBB, M.R.C.S.E., has been appointed House-Surgeon to the Metropolitan Free Hospital, Devonshire-square, vice J. Warner, M.D., resigned.

J. HAIR, M.D., has been elected Medical Officer and Public Vaccinator for District No. 5 of the Sudbury Union, Suffolk, vice B. F. Symmons, L.S.A., resigned.

D. MACKINTOSH, M.D., has been elected Medical Officer for District No. 3 of the Ely Union, Cambridgeshire, vice J. Stanley Sterndale, M.R.C.S.E., deceased.

J. MARR, L.R.C.P.Ed., has been appointed Medical Officer and Public Vaccinator for the Thornley District of the Easington Union, Durham, vice R. Wilson, M.D., resigned.

J. MORGAN, M.R.C.S.E., has been elected Medical Officer and Public Vaccinator for the Northern Division of the Wellington Union, Salop, vice J. F. Steedman, M.D., resigned.

Dr. WM. MOORE has been elected Physician in Ordinary to Sir P. Dun's Hospital, Dublin.

G. S. MORRIS, M.D., of Guisborough, has been appointed Surgeon to the Chaloner Lodge of Independent Order of Odd Fellows, Manchester Unity, vacant through the death of T. Bird, L.S.A., of Guisborough.

J. RUSSELL, M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Scrooby District of the East Retford Union, Nottinghamshire, vice G. Russell, M.R.C.S.E., resigned.

F. C. SAMPSON, L.R.C.S.I., has been elected Medical Officer and Public Vaccinator for the Mountshannon District of the Scariff Union, Co. Clare, vice O'Brien, deceased.

J. H. SIMPSON, M.R.C.S.E., has been appointed second Assistant Medical Officer at the Kent County Lunatic Asylum, Barming-heath, vice E. S. Ashford, L.R.C.P.Ed., resigned.

H. THOMPSON, F.R.C.S.E., Assistant-Surgeon University College Hospital, has been promoted to Surgeon.

J. C. THOROWGOOD, M.D., has been appointed Assistant-Physician to the City of London Hospital for Diseases of the Chest, Victoria-park.

## MILITARY AND NAVAL MEDICAL APPOINTMENTS.

H. J. BEACH, M.R.C.S.E., Assist.-Surg. Bengal Service, in medical charge of the Civil Station at Chanda, has been placed in charge of the Treasury in that Station.

J. W. BELCHER, M.D., Staff Assist.-Surg., Bombay, has been appointed to the medical charge of the H Battery 18th Brigade Royal Artillery.

C. BERTINGHAM, Assist.-Surg. Bengal Medical Establishment, has been permitted to resign his Commission.

D. COSTELLO, Surg.-Major Bombay Army, has been appointed Presidency Surgeon 1st District, vice Wright, promoted, and to act as Deputy Inspector-General of Hospitals during the absence in England on sick certificate of Deputy Inspector-General of Hospitals W. Arbuckle, M.D., or until further orders.

H. T. DANN, M.R.C.S.E., Assist.-Surg. Bombay Service, has been transferred from the B Battery 18th Brigade, to the medical charge of the 14th Native Infantry.

J. DAUBENY, M.R.C.S.E., Assist.-Surg. Bombay Army, has been appointed to the medical charge of the 3rd Regiment of Sindh Horse.

A. C. C. DE RENZY, M.R.C.S.E., Assist.-Surg. B Battery 19th Brigade Royal Artillery, Bengal, has been directed to assume medical charge of C Battery 24th Brigade.

J. N. DICK, L.R.C.S.Ed., Surgeon R.N. Sept. 27th, 1861, has been appointed to the "Medina" Surveying Vessel in the Mediterranean.

R. E. FITZGIBBON, M.R.C.S.E., has been appointed to the 60th Foot, vice Sparrow, deceased.

J. J. HAMILTON, Deputy Inspector-General of Hospitals Bombay Army, has been permitted to retire from the Service on the pension to which he is entitled by the Regulations No. 330 of 1863.

T. B. JOHNSTONE, Surgeon Bombay Army, has been promoted to Surg.-Major.

L. H. LEES, M.D., Assist.-Surg. Bengal Service, of the 31st Punjaub Native Infantry, has been appointed Civil Surgeon at Akyab.

W. E. M'DERMOTT, Acting Assist.-Surgeon R.N., has been appointed to the "Forte."

E. M'KELLAR, Assist.-Surg. 10th Bengal Cavalry, has been appointed to the medical charge of the Divisional and Brigade Staff, Simla, vice Assist.-Surg. J. Ince.

W. MACLEOD, M.D., Surgeon R.N. Aug. 15th, 1853, has been appointed to the "Russell."

J. MILLER, M.D., Assist.-Surgeon 21st Madras Native Infantry, has been appointed Medical Officer at Ootacamund from the date of the expiration of Dr. Stewart's tour of duty on the Neilgherries.

W. MOIR, M.B., Civil Assist.-Surgeon Bengal Service, 25th Brigade Royal Artillery, has been appointed to officiate as Civil Assist.-Surg. at Mynpoory during the absence on leave of Assist.-Surgeon G. Barnard, or until further orders.

A. G. MONTGOMERY, M.R.C.S.E., Staff Surgeon Army on half-pay, has been appointed Staff Surgeon, vice Fitzgibbon, appointed to the 60th Foot.

J. G. NICOLSON, M.D., Surgeon Bombay Army, has been transferred from the 14th to the 21st Native Infantry.

R. B. O'TOOLE, L.R.C.S.I., Assist.-Surg. R.N. Oct. 8th, 1861, has been appointed to the "Egmont."

J. G. PILCHER, M.R.C.S.E., Assist.-Surg. Bengal Service, Civil Assist.-Surg. of Shahjehanpore, has been appointed to officiate in the same capacity at Boolundshuhur during the absence on leave of Assist.-Surg. D. Hood, or until further orders.

A. J. SCOTT, Surgeon Madras Medical Establishment, has been permitted to retire from the Service.

F. TURNBULL, M.D., Surgeon 10th Bengal Native Infantry, has been (as a temporary arrangement) placed in charge of the duties of Civil Assist.-Surg. at Shahjehanpore, in addition to his military duties.

J. WATT, Staff Assist.-Surg., has been attached to do duty with the 103rd Foot, Bombay.

A. WRIGHT, Surgeon-Major Bombay Army, has been promoted to Deputy Inspector-General of Hospitals, vice Hamilton, retired, and posted to the Poona District.

# Births, Marriages, and Deaths.

## BIRTHS.

On the 19th ult., at Peel, Isle of Man, the wife of Dr. J. Nelson Cregeen, of a son.

On the 24th ult., at Rye-hill, Newcastle, the wife of T. Figg, M.D., of a son.

On the 26th ult., at Richmond-terrace, Belfast, the wife of Dr. Arnold, of a daughter.

On the 29th ult., at Hovingham, near York, the wife of R. Gillard, M.R.C.S. Eng., of a daughter.

On the 29th ult., at Portsdown-road, Maida-vale, the wife of Chas. Browning, M.D., of a son.

On the 29th ult., the wife of H. W. Hubbard, L.R.C.P.I., of St. Peter's Lodge, Ladbroke-gardens, of a daughter.

On the 31st ult., at Pine House, Camberwell-green, the wife of John Swan Flower, Esq., of a daughter.

On the 2nd inst., at Leyburn, Yorkshire, the wife of Richard Metcalfe, M.D., of a daughter.

## MARRIAGES.

On the 1st ult., at Charlotte-town, Grenada, T. H. Passmore, Surgeon, to Elizabeth, daughter of S. Hall, M.D., late of Exeter.

On the 28th ult., at Brockhampton, near Ross, G. H. Holden, M.R.C.S.E., of Prestaign, to Ellen Mary, daughter of W. Stallard, Esq., of Brockhampton.

On the 28th ult., at Doon Church, Co. Limerick, A. A. Gore, M.D., to Rebecca, daughter of the late N. White, Esq., J.P., of Kilmoylan.

On the 30th ult., at the Parish Church, Bowdon, George Turner Birch, Esq., of Greenheys, to Mary Barton, daughter of Thomas Blease, Esq., of Altrincham.

## DEATHS.

On the 1st of May, at Theyat-Myo, Burmah, G. W. Pennington Sparrow L.R.C.P.Ed., Surgeon 3rd Battalion 60th Rifles, aged 41.

On the 8th of May, at Creswick, Victoria, Australia, W. K. Huston, M.D., aged 36.

On the 7th of June, Dr. S. Alexander, of Cincinnati, State of Ohio, formerly of the Co. Antrim, Ireland.

On the 8th of June, J. S. Sterndale, M.R.C.S.E., of Littleport, Ely, Cambridgeshire.

On the 19th of June, at Lucknow, Assist.-Surgeon T. F. Langstaff, L.R.C.S.I., doing duty with the Royal Artillery.

On the 20th of June, at Jamaica, Wm. Traser, M.D., formerly of Liverpool, aged 44.

On the 28th of June, at Cook-Mill House, Ingersell, Canada West, James F. M'Carthy, M.D., formerly of Cork.

On the 29th of June, C. J. Kinahan, L.R.C.S.I., Staff Assist.-Surg. Army.

On the 10th ult., at Draperstown, Dr. H. Hutchinson, formerly Surgeon Hon. E.I.Co.'s Service.

On the 13th ult., at South Portland-street, Glasgow, W. Aiton, M.D., Surgeon R.N. June 30th, 1812, on the retired list, aged 77.

On the 13th ult., at Kilcoleman-park, C. B. Lamb, L.R.C.S.I., Assist.-Surgeon R.N. April 19th, 1856.

On the 25th ult., at Bellgrove, Glasgow, John Fleming, only son of Dr. John Coats, aged nearly 12 months.

On the 25th ult., at Portlogan, Leswalt, J. Ker Ross, L.R.C.S.Ed., aged 31.

On the 25th ult., at Morton, G. O. Manton, M.R.C.S.E., of Bourn, Lincolnshire, aged 57.

On the 26th ult., at Bangor, W. T. Griffith, Surgeon, of Ely-place, and the Royal London Ophthalmic Hospital, Moorfields, aged 38.

On the 29th ult., at Dublin, R. A. Bagnell, M.D., aged 46.

On the 29th ult., at Weybridge, T. Norris, M.D., formerly of Chester, aged 74.

On the 29th ult., at Callan, Co. Kilkenny, A. P. Crosyn, L.A.H. Dub.

On the 31st ult., at Clarence House, Southsea, C. W. White, Staff Surg. R.N. Aug. 25th, 1841, aged 56.

On the 31st ult., at Broughton-Blean, near Faversham, Kent, W. M. Ogilvie, M.R.C.S.E., Surg. R.N. May 1st, 1857, aged 37.

On the 1st inst., at George-street, Limerick, of gastric fever, D. Griffin, M.D.

On the 1st inst., at Alford, Lincolnshire, of consumption, Ann, the youngest daughter of Dr. Uvedale West, aged 16 years. She was a Life Governor of the Royal Medical Benevolent College.

On the 2nd inst., at Basingstoke, O. Workman, M.R.C.S.E., formerly of Heckfield, aged 63.

On the 3rd inst., at Cornwall Villas, Kentish-town, W. Bagster, M.R.C.S.E., aged 82.

On the 3rd inst., of typhus fever, Thos. H. Hughes, M.D., House-Surgeon to the Chester General Infirmary, aged 25.

On the 7th inst., at Boston, Lincolnshire, of scarlet fever, Allan Cuthbertson, second son of A. Mercer Adam, M.D., aged 4 years and 6 months.

On the 8th inst., at Trafalgar-square, Brompton, Charles Henry Phillips, F.R.C.S.E., aged 75.

On the 8th inst., at Kenilworth, George Ayton, Esq., Surgeon, aged 41.

On the 8th inst., at Newport, Isle of Wight, Frances Elizabeth, only daughter of Henry Waterworth, F.R.C.S., Surgeon to the Isle of Wight Artillery Militia, aged 15.

## BOOKS ETC. RECEIVED.

Mr. Macilwain's Remarks on Ovariotomy.
Treatise on Hygiene with Special Reference to the Military Service. By Dr. W. A. Hammond, Surgeon-General U.S. Army.
Magneopathy. By Mr. H. Perry.
Ben Rhydding. By the Rev. R. W. Thomson.
Dublin Quarterly Journal of Medical Science.
Art Journal.

# Medical Diary of the Week.

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| MONDAY, Aug. 17 ..... | ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM.—Operations, 1½ P.M.<br>METROPOLITAN FREE HOSPITAL. — Operations, 2 P.M. |
| TUESDAY, Aug. 18..... | GUY'S HOSPITAL.—Operations, 1½ P.M.<br>WESTMINSTER HOSPITAL.—Operations, 2 P.M. |
| WEDNESDAY, Aug. 19 | MIDDLESEX HOSPITAL.—Operations, 1 P.M.<br>ST. MARK'S HOSPITAL.—Operations, 1 P.M.<br>UNIVERSITY COLLEGE HOSPITAL. — Operations 2 P.M.<br>LONDON HOSPITAL.—Operations, 2 P.M. |
| THURSDAY, Aug. 20 ... | ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.<br>CENTRAL LONDON OPHTHALMIC HOSPITAL — Operations, 1 P.M.<br>GREAT NORTHERN HOSPITAL, KING'S CROSS.—Operations, 2 P.M.<br>LONDON SURGICAL HOME.—Operations, 2 P.M.<br>WEST LONDON HOSPITAL.—Operations, 2 P.M.<br>ROYAL ORTHOPÆDIC HOSPITAL. — Operations, 2 P.M. |
| FRIDAY, Aug. 21..... | WESTMINSTER OPHTHALMIC HOSPITAL. — Operations, 1½ P.M. |
| SATURDAY, Aug. 22 ... | ST. THOMAS'S HOSPITAL.—Operations, 1 P.M.<br>LOCK HOSPITAL, Dean-street, Soho.—Clinical Demonstrations and Operations, 1 P.M.<br>ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.<br>KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M.<br>ROYAL FREE HOSPITAL.—Operations, 1½ P.M.<br>CHARING-CROSS HOSPITAL.—Operations, 2 P.M. |

# To Correspondents.

*Studens.*—It is said that recent inquiry has corroborated the truth of M. Larcher's assertion—viz., that during pregnancy the walls of the left ventricle of the heart increase in thickness, while the rest of the organ remains as before. This hypertrophy is stated to continue for some time after delivery, and varies from one-fourth to one-third increased thickness.

*Medicus*, (King's Lynn.)—He should communicate with the Coroner of the district.

*Mr. F. Godrich* (West Brompton) is thanked. A notice next week will oblige.

### THE CASE OF CANCEROUS TUMOUR AT TUNBRIDGE WELLS.

*To the Editor of* THE LANCET.

SIR,—My name having been brought forward in the discussion now carried on in your columns, touching the death of a gentleman which took place here a few weeks ago, I feel from what has been said that, in vindication of my own judgment in the case, and in a want of concurrence with much that has been put forth in the letters given in your last number, it is incumbent upon me to ask the favour of your insertion of my own version of the story, which I shall endeavour to give in as truthful a manner as memory will serve. I cannot, however, enter upon the subject without recording the expression of my regret that the body of a professional brother should thus have become, as it were, the battle-field for waging the war of a professional dispute.

As recorded by Dr. Bell in his report, at our first consultation I gave it as my opinion that a malignant growth interfered with some part of the lower bowel; for, as Rokitansky has with his great experience and well-known sagacity observed, when we do suspect cancer of the bowel, it is almost always in some part of the colon. All practical men are aware of the difficulty which often besets the accurate diagnosis of abdominal tumours. The history of this case, the general appearance of the patient, and the severe symptoms, all pointed to such an inference. Tenesmus, accumulations of flatus, and other marked irregularities in the bowels, were very significant of the earlier stages of this disease. Again, there had long been a gradual and continuous loss of flesh. For some time past he had felt a dragging weight at the left epigastrium, accompanied with numbness down the left leg, extending to the toes. The stools were attenuated. There was pressure at the neck of the bladder, as evinced by aching pain at the perinæum and repeated micturition. A round, hard lump was felt; its movement gave pain; whether wholly or partly fæcal or not, it was manifestly in proximate connexion with diseased structure. The post-mortem proved this to be fæcal matter based upon the cancerous growth. From a calm and dispassionate view of all these circumstances, from the various negative facts which did away with most of the probabilities presupposing other forms of disease, the great and preponderating weight of evidence fell into the scale of cancer, and Dr. Bell and myself from first to last thus regarded the case. Hence our opposition to any interference in the way of bougies, or that more serious *ancepa remedium* with which is associated the name of Amussat.

On Sunday, May 10th, Dr. Bell came to my house about noon. He said the patient's father-in-law (a medical man) had come down from town; that he disagreed with us in opinion, contesting it to be simple stricture, or a mere accumulation of the ordinary contents of the colon. Dr. Bell also informed me that grave abdominal inflammation had set in, nor would it surprise him if the patient did not survive forty-eight hours. He desired me to meet him at four o'clock. I then, as represented, found the patient labouring under acute and diffuse peritonitis. I tried by various arguments to point out to Mr. Hicks our fears as to malignant disease, but with little success in the way of making him a convert to that way of thinking. Dr. Bell desired me to meet him again next morning. The symptoms were aggravated; there was excessive tenderness over the whole of the abdomen; but the pulse was of good volume, and not more than 100. The remedies indicated were employed without delay, Mr. Hicks acknowledging the peritonitis, and fully acquiescing in all suggested as to treatment. About three o'clock in the afternoon of the same day (May 11th) there was a sudden ring at my bell. It was Mr. Andrew, the brother-in-law of Mr. Solly, and the intimate friend of the patient. The moment Mr. Andrew entered, he said, in tone and manner evincing much agitation, "Dr. Wardell, you are to come to Lansdowne-road directly. Mr. Solly was telegraphed for; he has just arrived, and wishes to see you without delay. He says an operation must be performed *immediately*. It is the only thing to save his life! Have you this instrument?" Mr. Andrew put into my hand a slip of paper, upon which was written (I believe by Mr. Solly) "A canula for *opening the colon*." I said I had not the instrument, and I also said I should not agree to such an operation. Mr. Andrew bade me step into the fly which he had brought for me, and he said, as I had not the instrument, he would call when on our way to Lansdowne-road at the infirmary. The house-surgeon was not in. He bade me drive to the patient's house, and he would go to some of the surgeons to borrow the canula. This statement very curiously asserts with the inference deducible from Mr. Andrew's published note. When I arrived, Dr. Bell, Mr. Solly, and Mr. Hicks were in the room. Mr. Solly said, in words as nearly as I can recollect, "Dr. Wardell, I think of opening the colon; but first I should like to have your version and opinion of the case, and, too, without your hearing anything we three have said. I have also sent for Mr. Trustram." I am not quite sure whether the phrase were, "I *think* of operating," or "I have *resolved* on operating;" but the impression on my mind is that the expression was tantamount to resolution. I then detailed all I knew relative to the case, laying emphasis upon its previous history: the cachexia, the loss of flesh, the slight stooping to one side in accommodation to the dragging weight at the left hypogastrium, and the various other symptoms indicative of malignant disease. I stated also that the patient had only been thus gravely ill for two or three days; that on Saturday a large enema had been given; that percussion then did not indicate an overloaded condition of the bowels; that he had, I felt sure, none of that extensive impaction of the colon demanding so formidable an alternative. There was no stercoraceous vomiting; he was not sinking: in fine, that we regarded it as a severe case of peritonitis, and that there was much to hope for when the medical means had come more fully into operation. I concluded such arguments by averring that I could not share in the responsibility if the colon were opened. I begged, if such were the resolve, that at all events it might be deferred until the morrow, when I trusted there would be a mitigation of the symptoms. Dr. Bell then said, such was the opinion he had given before my arrival. Mr. Solly then said, "I'll go up alone and see him." When he came down stairs, he said, "Well, then, we will do nothing to-day. If to-morrow there be no improvement, telegraph to me, and I will bring down Adams, who has lately performed the operation." The next day the patient was better, and Mr. Trustram approved of the operation not having been done.

I saw the patient from time to time during the next fortnight; but whenever I did see him it was at the special request of Dr. Bell. On the 27th, I met Dr. Ferguson, Dr. Bell, Mr. Trustram, and Mr. Hicks. Dr. Ferguson patiently listened to an entire history of the case. He then carefully examined the patient. He fully discussed the case in all its bearings, and completely endorsed the opinion of a cancerous growth. He emphatically discountenanced not only Amussat's operation, but any further introduction of bougies. Mr. Trustram put forth some arguments in favour of opening the colon; but Dr. Ferguson was so decided as to the inexpediency, that he deemed all additional discussion on that point utterly useless. Dr. Ferguson also gave it as his opinion that the patient would not live ten days. On the 29th, Mr. Ferguson came down with Mr. Solly for the purpose of considering the question of the operation. The result of the consultation was its inadmissibility. There is a fact, and I conceive a very important fact, to be mentioned here. Mr. Ferguson, after having gone up stairs alone to once more see the patient, said when he came down that the patient had assured him he had during the previous six days passed not less than six tumblerfuls of fæcal matter. I may add to this that not many days before the patient died I saw in the vessel which had that morning been used not less than from six to ten scybalæ, not less than large filberts or small walnuts. This statement I make with a strict regard to the avoidance of exaggeration.

In a few words, to contemplate this illustration of a terrible disease simply in a scientific aspect, and divesting it of all pertaining to the misunderstanding to which it most unfortunately gave rise, I am at a loss to conceive how an endeavour could have been and is still made to prove the warrantableness of Amussat's operation. I need scarcely remind the profession that of the 44 cases tabulated by Mr. Cæsar Hawkins, 22 did not survive the operation, 9 only lived so much as a year, and 1 only had lived more than three years after it. Again, those which did survive the operation were most probably not cases of cancerous obstruction. The bowels may be obstructed from a variety of causes: from intussusception, from a matting together or strangulation by effused lymph, an adherent appendix vermiformis, a large gallstone, and other conditions, and in such non-malignant affections a false anus is much more feasible. But I maintain—and I am sure the candour and intelligence of the profession will maintain—that in cancer of the colon, when fæcal matter of the volume and in the quantity mentioned was voided, opening the bowel externally could not be recommended. Mr. Trustram, when at my house a few days ago, attempted, though I think unsuccessfully, to argue that the bowel ought to have been opened for the exit of the flatus! He will remember how Dr. Ferguson smiled at this idea. If fæcal matter of the configuration of filberts and small walnuts could pass, it is presumptive that air could also. On a pretty extended reference to the literature of this subject, I can find no instance in which it was had recourse to for that purpose. In the cases where it had been performed, the bowels had generally been absolutely obstructed for many days; in one example so long as forty-six days. Uncontrollable sickness, stercoraceous vomiting, threatened collapse, are the conditions which mostly urge this last and doubtful resort—certainly not flatus. The immediate cause of death was rupture, which occurred just above the diseased mass. The perforation was not a slit, but punched, round, clearly defined, without any lipping out of the mucous membrane, as in a wound or tear. This round hole I have seen in idiopathic peritonitis and in typhoid fever repeatedly. It proclaims ulceration, softening, absorption, and, as Rokitansky observes, "the destruction of the external and internal plates coincide." The disease extended to the place of perforation, as one of these abnormities of the tissues associated with these heterologous products. In a cachectic subject, in one whose general strength had wellnigh succumbed to an acute attack of disease, which could scarcely be said to have terminated, the great shock attending the sudden effusion of a large quantity of semi-fluid fæcal matter into the cavity of the peritoneum was certain to be shortly followed by a fatal issue. This was the cause of death, and not the flatulent condition of the intestines.

If a fair and unprejudiced review be taken of all that was done in the shape of treatment, I am constrained to the admission that the regret could only be in so much as related to the introduction of the bougies. Far be it from me to say this, however, in any improper spirit of condemnation, as I am sure the advocates of that mode of procedure were influenced by an earnest desire to benefit the poor patient. If it had so happened that the cause of all the mischief lay in a simple dilatable stricture of the upper part of the rectum, that description of treatment would, doubtless, have proved of essential service.

A short time after the patient's death, Mr. Hicks called at my house prior to his leaving Tunbridge Wells, and he most cordially thanked me for such attention as I had given to the deceased. He said on that occasion: "Dr. Wardell, it is due to you from me to say that all you said and all you recommended from first to last, as proved by the inspection, were correct." I record this declaration because this gentleman had during the consultations expressed himself differently.

I am, Sir, your obedient servant,

Tunbridge Wells, August, 1863. JOHN RICHARD WARDELL, M.D.

*Dr. W. Bird Herapath* is thanked for having forwarded to us an early copy of his Address on Chemistry in its relation to Medicine, prepared for delivery at the British Medical Association; but we do not propose on the present occasion to report the proceedings at length.

### THE LARYNGOSCOPE.

*To the Editor of* THE LANCET.

SIR,—In an article on a "Description of a Laryngoscope," which appeared in your journal of last week, Mr. Mason describes an instrument for which he apparently claims some originality of construction.

We would beg to say that the elastic head-band and forehead-plate was devised and introduced by us in May, 1862, and that the attachment of the reflector by means of a ball-and-socket joint was shown in Professor Czermak's case in the Exhibition of last year amongst several other methods of holding the mirror.

The same article implies that the ball-and-socket-joint movement has advantages not possessed by the one which we constructed, and which Mr Mason describes as working on a hook bent at an angle.

To this we would remark that the former has no mechanical advantages whatever, and that we have been assured by several gentlemen, well known for their laryngoscopic investigations, that the plan adopted by us leaves nothing to be desired, and that it is both more simple and portable.

We are, Sir, your obedient servants,

Strand, London, August, 1863. JOHN WEISS AND SON.

*T. T.*—It is, of course, quite possible; but though Lehmann has come to the conclusion that the solvent power of lactic acid on phosphate of lime is much greater than that of acetic acid on the same salt, others have asserted that its direct action seems far less, and that it is, in fact, generally feeble in this respect as compared with many other acids.

*L. N.* would oblige by forwarding to us reports of any cases in which Dr. N. has acted as stated.

PUBLIC VACCINATORS.

*To the Editor of* THE LANCET.

SIR,—Having noticed some letters in your journal of late (and amongst them one from Mr. Henry Ubsdell), complaining of the interference on the part of the public vaccinators with private patients of other practitioners, allow me to suggest a plan adopted in my neighbourhood, which effectually prevents such innovations.

I send a list every quarter of all cases of successful vaccination performed by me to the public vaccinator of the district, who includes them in his report to the board of guardians and registrar, receiving his fee for each case, just as though I had been his assistant. By this means he does not interfere with me (not being worth his while), and is saved the trouble of calling upon patients where he has no business to intrude himself, or rob me of my fee from them as private patients. Of course this plan is mutual amongst the practitioners here, and I can state at the same time strictly legal, for I have been informed upon this point by the Government Inspector of Vaccinations.

I am, Sir, yours, &c.,
Oundle, August, 1863. G. W. B. CALCOTT, M.R.C.S.

*** However effective the above plan may be in preventing the public vaccinator from encroaching upon the practice of surgeons in his neighbourhood, we take leave to question the legality of the proceeding. If not opposed to the very letter, it is to the spirit of the Vaccination Act. The guardians, we believe, might refuse the fees in all cases in which the public vaccinator or his assistant had not personally performed the operation. The ratepayers of any district cannot justly be saddled with such a charge. The members of the profession are bound as far as possible to identify the interests of the public with their own. It is questionable whether this object is attained by the course to which the above letter refers. There can be no doubt that the manner in which the Vaccination Act is carried out by some public vaccinators in the country is injurious to the interests of private practitioners; but one injustice cannot with propriety be compensated by another. We are bound on all occasions to protect the interests of the profession; but equal care must be taken that no injustice is inflicted on the public.—ED. L.

*Botanist.*—M. Kosman's series of interesting experiments, demonstrating that ozone is disengaged from the leaves and green parts of plants, were reported in the *Comptes Rendus*. In cities, ozone is more abundant during the night; the reverse being the case where vegetation abounds.

*Dr. J. R. Wolfe*, (Glasgow.)—The demands on our space are at present too considerable.

IF *A Learner* will send us his name and address, he shall receive a private note.

POOR-LAW MEDICAL RELIEF IN GLASGOW.

*To the Editor of* THE LANCET.

SIR,—I send herewith a Glasgow newspaper of August 5th, in which is a half-yearly report of the City parish, which has a population of probably about 150,000. I think the subjoined extracts are worth copying, as it seems to me that the amount of cordials prescribed by the twelve medical officers is too small for the large number of patients. Surely the amount of beef especially is too little, considering the number of debilitating diseases that must be attended to; scrofula and consumption, for example. I remember that in a previous half-yearly report the quantity was then stated to be 36 lbs. Last half-year it is but 18 lbs. Why so much economy in what is often more needful to the sick than physic? The quantity seemed ridiculously little before, but it is worse now. The amount of out-door relief being necessarily small, paupers scarcely taste animal food in health, and cannot be expected to buy it when they are ill, out of 1s. 6d., 2s., or 2s. 6d. weekly.

Be so good as to inform us in the north whether you are more liberal to the poor in London.

"*Out-door Roll.*—There were on the out-door roll at the commencement of the half-year, 3205. During the half-year there have been added to the roll 914, and struck off 690, leaving 3429 on the roll.

"*Medical Relief.*—Exclusive of those admitted to the sick wards of the poorhouse, medical relief has been given to upwards of 3900 persons, being 70 fewer than for the corresponding six months of last year.

"*Cordials.*—The following cordials have been given from the dispensaries, by order of the medical officers—viz., 265 gills of wine, 2 of brandy, 15 of gin, 115 of whisky; 2 lbs. of arrowroot, 16 lbs. of rice, and 18 lbs. of beef."

I enclose my card, and am, Sir, your most obedient servant,
Glasgow, August, 1863. A RATEPAYER.

*Brighton.*—It certainly is to be regretted that any person possessing the diploma of the Royal College of Surgeons of England should issue a circular such as that of Mr. Thomas Stowell, of the Brighton Botanic and Eclectic Dispensary. Such a document is not consistent with professional etiquette.

*Rustieus.*—Mr. B. acted throughout the entire transaction in a most unexceptionable manner. He is entitled on every ground of equity to retain the fee.

TREATMENT OF ECZEMA.

*To the Editor of* THE LANCET.

SIR,—May I ask through your columns what can best be done for a troublesome case of eczema of sixteen years' standing, which has hitherto, with the exception of temporary relief, resisted all treatment? Has any fresh light of late years been thrown on the treatment of this worrying complaint? Perhaps some of your numerous readers and correspondents may have successfully fought it, and would not object to give (briefly) the benefit of their experience, and much oblige,

Aug. 1863. A READER OF THE LANCET FOR THIRTY-FIVE YEARS.

*Pharmaceuticus.*—There is a "Pagliari's styptic" as well as a "Ruspini's styptic." We have not any personal knowledge of the effects of either. One hæmostatic is of more avail in certain cases than is another, which latter may be better than the former in another instance.

AN APPLICANT FOR A DIPLOMA.

THE following correspondence has taken place between A. B. and Mr. Needes, the highly respectable medical agent. Comment upon such a case is unnecessary:—

"SIR,—As an agent to the medical profession in general, I wish to ask you one question—that is, whether it is possible to obtain a diploma of M.D. (sine exam.) from a foreign country, or in England, or anywhere? There are such things done, and I wish to know whether you undertake to get them when wanted. I do not want any bother about a M.D. exam., and yet it is necessary to be able to call myself Dr. without committing myself. I have finished at the hospital, but have no qualification yet. An answer by return will oblige,

"Yours, &c.,
"A. B."

"SIR,—I am in receipt of your note. I know of no means whereby a medical diploma can be obtained, except through the ordinary and legal channel of examination. I have heard that such diplomas have been obtained in an illegal and unprofessional manner; but such proceedings never turn out satisfactory in the end.

"I would therefore counsel you to forego the *present* advantages which you say would accrue to you *now* by the possession of such a document, and set yourself honestly to work to obtain the coveted diploma in an honourable and legal way; and when you have *thus* secured it, you will, I am sure, more highly prize and appreciate the professional position which you have attained.

"I shall be happy to be of service to you in any legitimate manner, but not otherwise. "I am, Sir, your obedient servant,
"Aug. 10th, 1863." "JNO. W. NEEDES.

*Mr. Duckworth.*—If he practise as an apothecary, he can be sued under the Apothecaries Act.

*Dr. F. J. Brown* (Rochester) is thanked.

*M. A. B.'s* somewhat voluminous manuscript shall meet with attention.

A PUBLIC NUISANCE.

*To the Editor of* THE LANCET.

SIR,—This beastly pamphlet (a copy of which I enclose) was sent by post, addressed to my brother-in-law, a captain in the navy, who, being with his ship in the China Seas, has left his wife and three children in a villa at Ryde. During a few days' residence here with her sister, this abomination, addressed to her husband, is forwarded to her, which at the breakfast-table this morning she opened, and handed to me. Can nothing be done to punish the author and circulator of such atrocities, as on glancing at its contents I find that it contains quite sufficient indecency to bring it under Lord Campbell's Act? I enclose my card, and am, Sir,

Your obedient servant,
August, 1863. PATERFAMILIAS.

*** The work referred to in the above communication is entitled "Manly Vigour, the Art of Preserving, Improving, and Recovering it; with Notes on the Causes of its Decline and Loss," &c. &c., by "Dr." A. F. Henery. To those who know anything of this self-styled "doctor," it is scarcely necessary to say that the book is a compound of ignorance, impudence, and obscenity. Surely Lord Campbell's Act must be able to reach such an offence against public decency as the circulation of this filthy work.—ED. L.

*Dudley.*—Mr. Horton, Surgeon, should give a hint to his friends connected with a local paper that they do him no real service by constantly parading his name before their readers.

A QUEER ASSOCIATION.

*To the Editor of* THE LANCET.

SIR,—The "queer association" in your impression of last week reminds me of another related to me by an old naval surgeon.

During the French war, the Admiral, then on the Mediterranean station, once hailed a transport ship, and, after the usual questions, demanded "what was her cargo." The reply was, "Bullocks and surgeon's mates!"

I am, Sir, your obedient servant,
August, 1863. W.

ERRATUM.—An important error occurred in our leading article last week on Prison Discipline in relation to Exercise and Diet. Dr. Edward Smith's observations on the weight of the fæces referred to *prisoners*, not *farmers*.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. W. B. Herapath; Mr. B. Raper, Leeds; Dr. Clarke, Walsall; Mr. Wright, Belper; Mr. Hale, Chesterfield, (with enclosure;) Mr. J. Haworth, Keighley; Dr. Bee; Mr. Muggeridge, Reading, (with enclosure;) Mr. H. Wilson; Mr. R. F. Allen, Towcester, (with enclosure;) Mr. J. C. Morris, Kidwelly, (with enclosure;) Mr. Hainworth; Mr. Bliss, Leamington; Mr. Cockcroft, Catterick, (with enclosure;) Mr. Johnson, Lancaster; Dr. Mercer, Boston; Mr. Lor, Leeds, (with enclosure;) Dr. Sloane, Ovenden; Mr. J. Mason, (with enclosure;) Dr. Rose, Kidderminster; Dr. Fleming, Burt; Dr. Waterworth; Messrs. Maw and Son; Dr. Bowman, Montreal; Mr. Parker, (with enclosure;) Dr. W. Moore; Mr. Goodwin; Dr. Darder, Bristol; Mr. Fleischmann, Cheltenham; Mr. Hawkins; Dr. Keegan, Worksop; Mr. Corry, (with enclosure;) Dr. W. B. Carpenter; Mr. Addison, Rugeley, (with enclosure;) Dr. Glover, Cerne Abbas, (with enclosure;) Mr. Robertson; Mr. Davies, Slough, (with enclosure;) Mr. M'Enery, (with enclosure;) Messrs. Weiss and Son; Mr. Calcott; Dr. Black, Danvegan; Mr. Philipson, Newcastle; Mr. Hayman, Burnham; Mr. J. Stewart, (with enclosure;) Army Surgeon; A Ratepayer, Glasgow; Constant Subscriber; Enquirer; A Country Surgeon; Medicus; L. N.; M.D.; A Reader; Not one of the Faculty; A Provincial Surgeon; Subscriber; J. B. B.; M.R.C.S.; Rusticus; &c. &c.